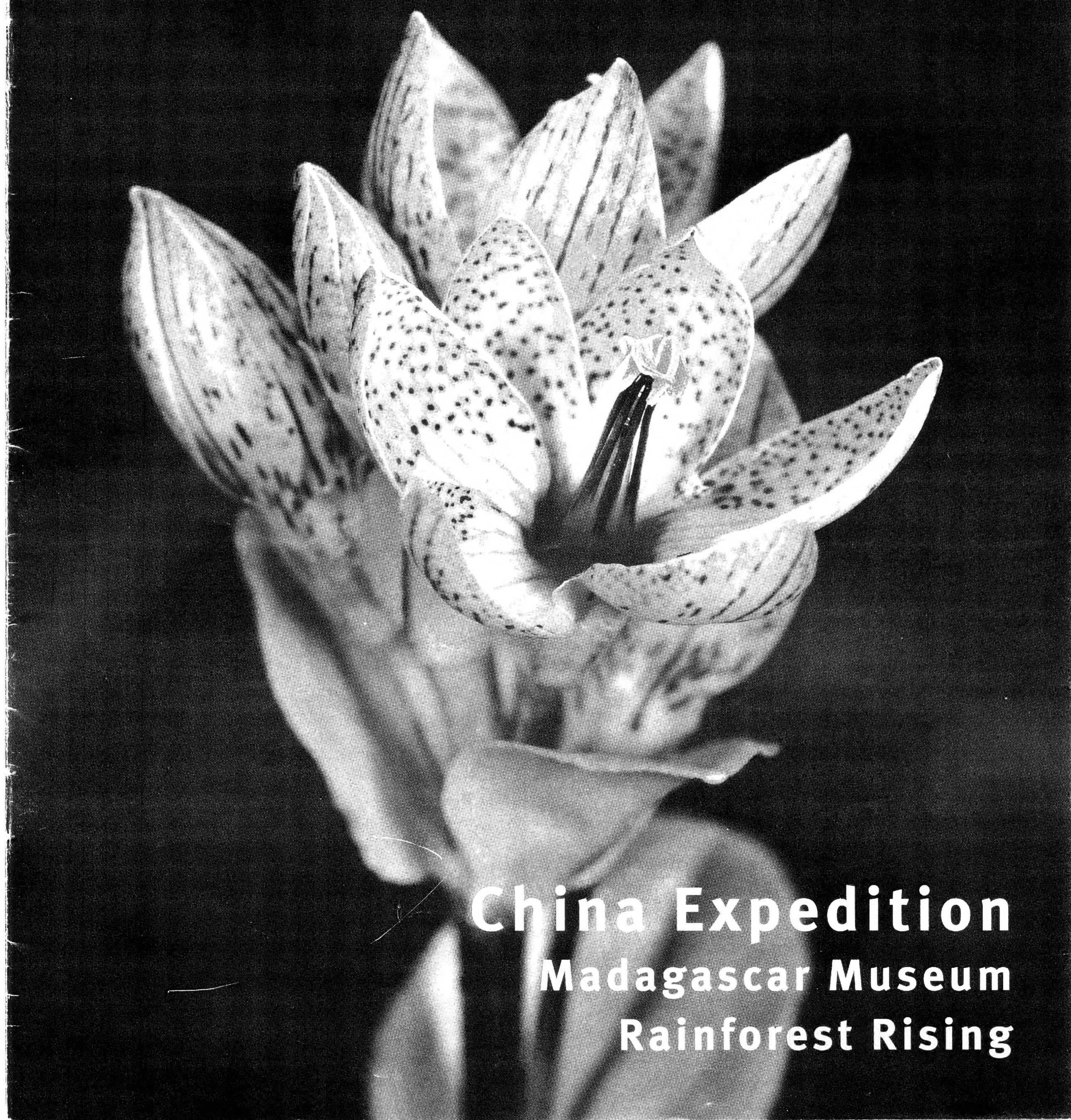
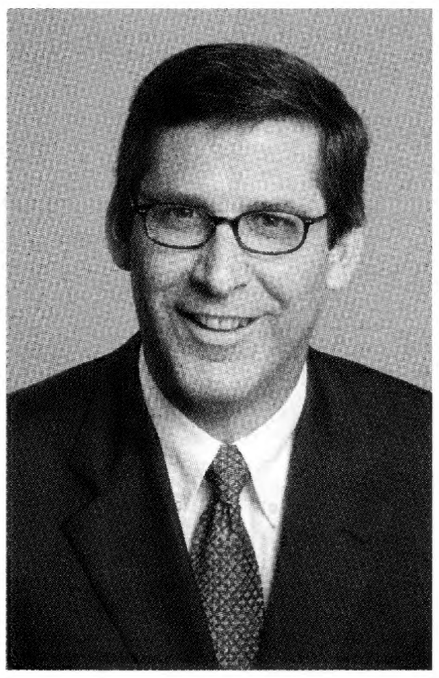
CALIFORNIA
ACADEMY OF SCIENCES

MEMBER PUBLICATION SPRING 2007



China Expedition
Madagascar Museum
Rainforest Rising



Although they are often overlooked, diatoms are—in my own slightly biased opinion—among the most fascinating organisms on Earth. These microscopic single-celled organisms are found throughout the world: on land, in the soil, in the oceans and in freshwater, and even in the clouds. Tracking their distribution is central to understanding past climate change, revealing environmental disruptions and change today, and predicting possible future environmental trends. When I joined the Academy in 1989 as the first Hanna Chair of Diatom Studies, I was given the opportunity to study these patterns and trends by working with the world's third largest collection of diatoms, housed here at the Academy.

Ten years ago, I assumed a new role as the Academy's Executive Director and broadened my field of focus to include a group of complex multi-cellular organisms, including Academy staff, visitors, students, educators, and volunteers. Together, we have made astounding progress in our mission to explore, explain, and protect the natural world. Over the past ten years, we have developed and begun to implement plans for a state-of-the-art new facility in Golden Gate Park that will inspire generations of new visitors with its innovative design and engaging exhibits. We have created a culture of collaboration, in which the Academy sent its first multi-disciplinary research expeditions to China, Madagascar, and Myanmar. And we have elevated the importance of education at the Academy by forging relationships with local universities and creating successful internship programs for high school and college students.

It has been an honor for me to lead the Academy through this exciting chapter in its illustrious history. However, I have also missed the opportunity to conduct field research and pursue a better understanding of diatom diversity and distribution. Now that the Academy is poised to enter a new phase of its life, I am ready to pass the reigns of leadership. I am delighted to announce that the recipient of those reigns has just been selected by the Academy's Board of Trustees. Dr. Gregory Farrington, a renowned chemist, prolific author, and former president of Pennsylvania's Lehigh University, will begin his service at the Academy on February 26. During his tenure at Lehigh, Dr. Farrington successfully spearheaded a $500 million fundraising campaign, restored and enhanced Lehigh's campus, and improved the university's academic programs. Before joining Lehigh University in 1998, Dr. Farrington spent nineteen years at the University of Pennsylvania, where he served as Dean of the School of Engineering and Applied Science and as Director of the Laboratory for the Structure of Matter. Dr. Farrington's dedication to education and research coupled with his proven leadership record make him the ideal candidate to lead the Academy in its ongoing physical and programmatic transformation.

I look forward to working with Dr. Farrington once he arrives to facilitate the much-anticipated move back to Golden Gate Park. I also look forward—with great enthusiasm—to returning to my role as the Hanna Chair of Diatom Studies. In the meantime, I want to extend my heartfelt thanks to the staff members, visitors, community partners, volunteers, and board members who have helped the Academy to achieve such monumental milestones over the past ten years.

- Patrick Kociolek, Executive Director

MEMBER PUBLICATON

Spring 2007, Issue No. 4

Pat Kilduff *Director of Marketing & Communications*

Stephanie Stone *Editor*

Andrew Ng *Editorial Assistant*

Charmagne Leung *Art Director & Production*

Contributors

Dong Lin *Cover Photo*

Cyane Anaya, Chris Andrews, Tom Daniel, Bing F. Quock, Carol Tang, and Tom Tucker

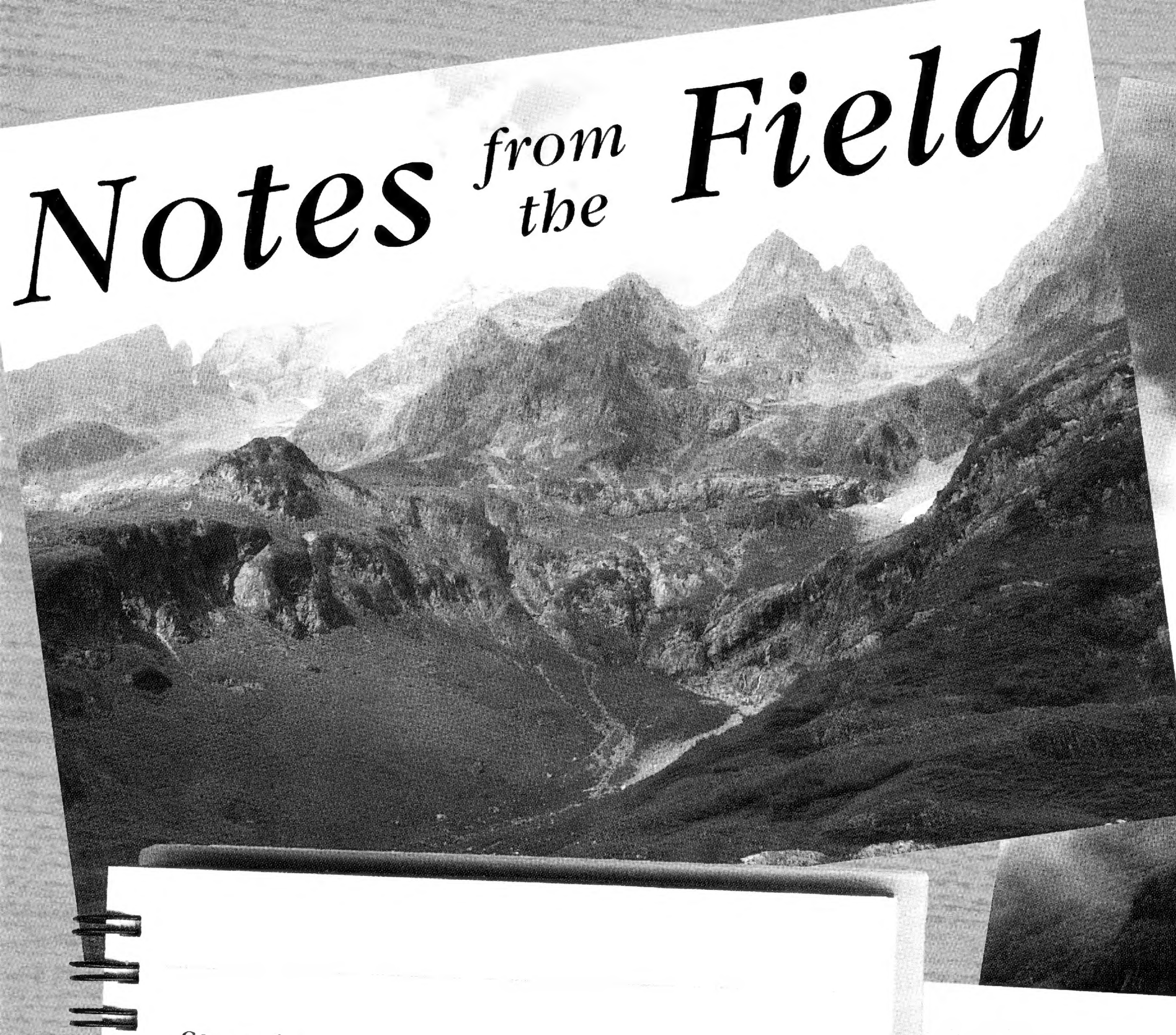
On the Cover

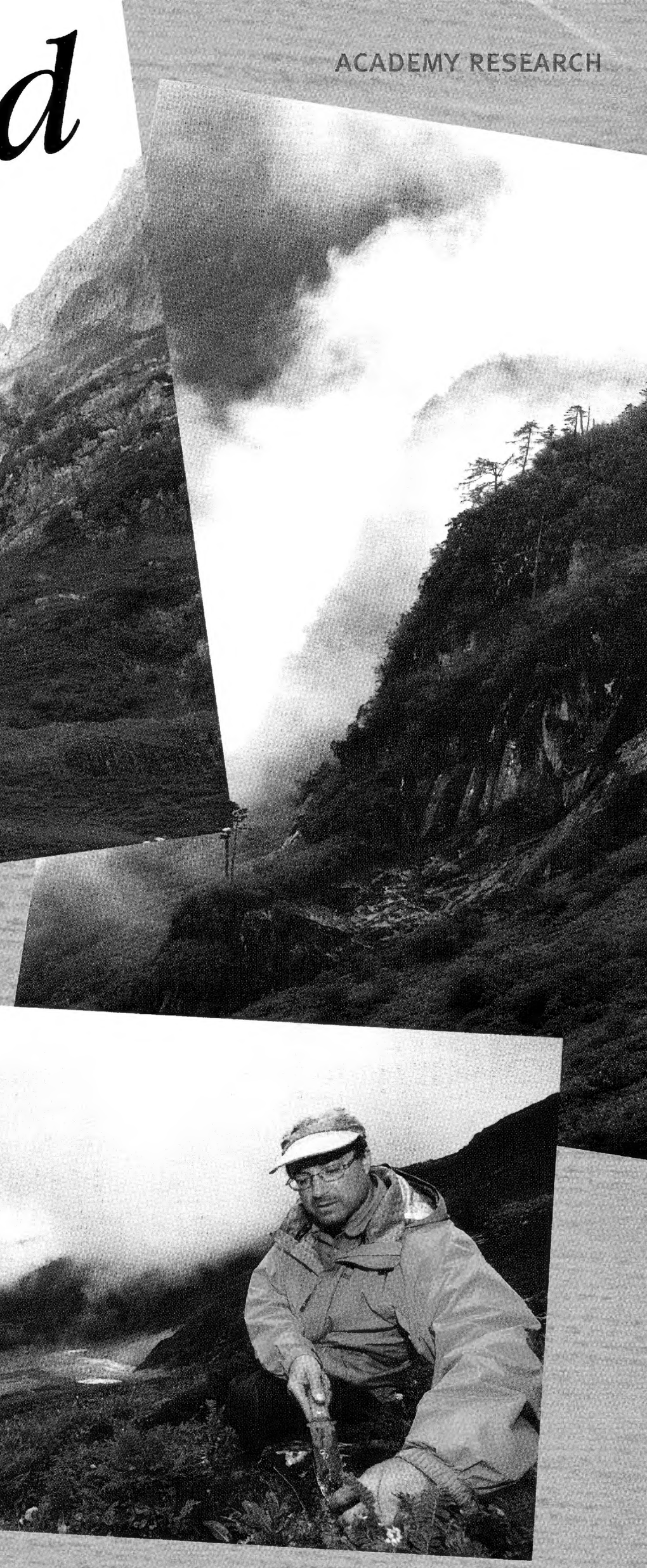
Academy photographer Dong Lin photographed this member of the Gentian family during the museum's most recent expedition to Yunnan, China. The flower, a member of the genus *Swertia*, was growing near the team's high-elevation camp at Lake Chukuai, just under the south facing slope of Mt. Kawa Karpu.

California Academy of Sciences Member Publication (ISSN 0000-0000) is published quarterly by the California Academy of Sciences, 875 Howard Street, San Francisco, California, 94103-3009. Telephone: 415-321-8000. Application to Mail at Periodicals Postage Rates is Pending at San Francisco, CA.

POSTMASTER: Send address changes to California Academy of Sciences Member Publication, 875 Howard Street, San Francisco, CA 94103.

Notes *from the* Field





Stretching across the southwest corner of China, Yunnan Province covers a mere 5 percent of the country's land but contains over 60 percent of its native biodiversity. Many rare and endangered species have found a last refuge in Yunnan's wide variety of ecosystems, earning the region a designation as one of the world's 34 biodiversity hotspots. In an effort to examine and protect this unique biodiversity before it disappears, the California Academy of Sciences has been working with the Kunming Institutes of Botany and Zoology in Yunnan to assemble a comprehensive inventory of the region's species. Three Academy scientists share their memories from the most recent expedition in the journal entries that follow.

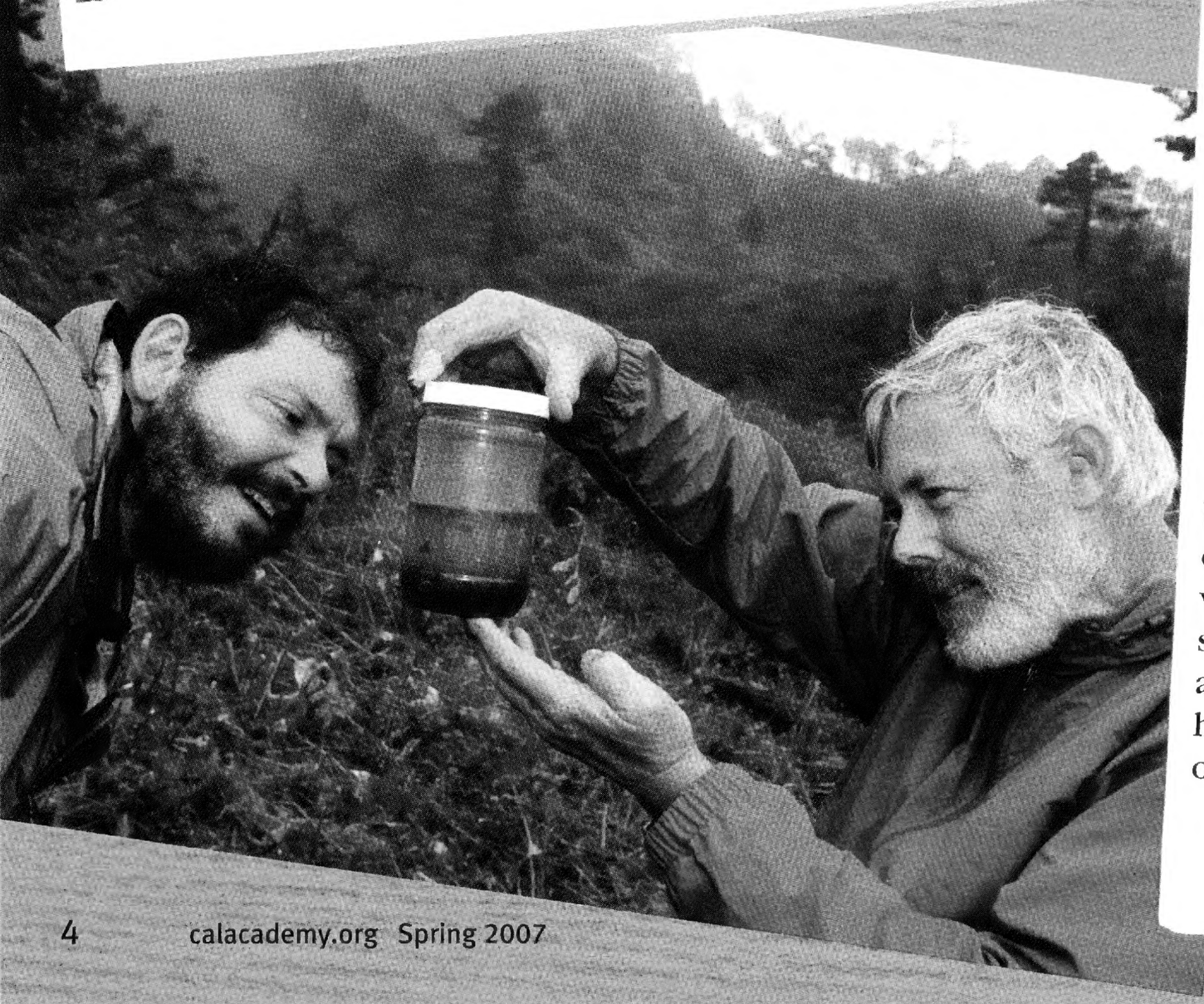
Three Academy scientists reach new heights in Yunnan, China

August 11, 2006 — *First Day in the Field*

Over the past eight years, the Academy has sent 11 scientific expeditions to Yunnan Province in southwestern China in order to document the region's stunning biodiversity. While all of the trips have been challenging in their own way, this current trip will be the most complicated by far because of the terrain we are hoping to survey. On our past trips, we have not been able to explore areas higher than 3,800 meters, since the high elevation habitats in this region are very difficult—and often dangerous—to access. On this trip however, with the help of two mountaineers, we are hoping to survey the habitats around a permanent snowfield at an elevation of over 4,000 meters on Mt. Kawa Karpu. These habitats are likely to house a number of species that have never before been documented by scientists. They are also very fragile, so we have decided to split ourselves into two smaller groups and send one group at a time to minimize our impact on the land. If all goes according to plan, the entomologists on our team will hike up the steep slopes of Mt. Kawa Karpu next week, and the botanists will follow them about ten days later.

For the next few days, the two mountaineers on the team will be scoping out the trail that leads to the snowfield to determine whether or not it will be safe for us to traverse. In the meantime, the rest of us have hiked to a lake near the Heipu Pass, which sits at about 3,600 meters, to acclimatize ourselves to higher altitudes and do some initial collecting. I have already collected a number of plants that I didn't see on previous expeditions, including some blue gentians and small, creeping wintergreens. I have also collected a great deal of trash. Although we are technically in a nature reserve, the understanding of how to treat a reserve in China is still evolving. Hopefully we can lead by example while we are here.

- Peter Fritsch, Botanist



August 16, 2006 — *Onward and Upward*

We must be an interesting sight: 45 porters carrying scientific equipment and camping gear, four cooks carrying whole pork legs, half a dozen entomologists armed with magnifying lenses and boxes of cornstarch, a professional photographer hauling a huge backpack full of camera equipment, and two mountaineers, all making their way along an incredibly narrow trail lined with steep drop-offs. Today was the second day of our journey up to the snowfield on Mt. Kawa Karpu, and after hiking for a full day and gaining about a kilometer in elevation, we were all ready to stop and set up camp for the night. Unfortunately, our dinner consisted of pork fat, cabbage, and blood sausage—not your neighborhood Hunan restaurant!

After dinner, I went out in search of tiny spiders that build webs along the bottom of fallen logs or rocks. Just 1-2 millimeters long, these spiders are often overlooked by entomologists in the field. With the help of a little cornstarch, however, they are relatively easy to find. The white powder, when puffed into likely spider habitats, sticks to any webs that it happens to hit, brightly illuminating the webs in the glow of a headlamp. Within a few hours, I found dozens of these tiny spiders, at least two of which appear to be new species.

- Jeremy Miller, Entomologist

August 19, 2006 — *Snow at Last*

I have been waiting for this day ever since the Academy's China Natural History Project was first established nine years ago. Today, after much planning and preparation, I finally made it to a permanent snowfield above 4,000 meters. I did my dissertation research on a group of beetles that live along the boundaries of permanent snowfields, so I've been itching to look for beetles up here for years. This afternoon, after hiking for about an hour and half to the edge of the snowfield, I was rewarded for the long wait. The very first rock I turned over revealed a *Nebria* beetle, a member of the genus I was hoping to find. A few minutes later, one of our guides found another *Nebria* beetle, and as soon as I saw it, with its long, slender legs and narrow body, I knew it was a new species.

These beetles hide under rocks along the borders of permanent snowfields during the day, coming out under the cover of darkness to feed on other insects. Copious amounts of food are dropped at their doorstep each day, as air rising up the mountain carries small insects across the snowfields. When the relatively warm air crosses the snow, it cools and dips, dropping a number of the insects in its currents onto the snow. I would have loved to stay for the feeding frenzy tonight, but the guides told us that a downpour was on its way, so we headed back to camp.

NOTE BOOK

- Dave Kavanaugh, Entomologist

August 31, 2006 — *Daddy Short Legs*

For the past few days, we've been collecting in the lush Dulong Valley while the botanists explore the slopes of Mt. Kawa Karpu. Today, we hiked for several hours from the small hillside town of Maku down to Qinlangdang, another small town along the shores of the Dulong River. After snacking on cucumbers to quench our thirst, we walked another kilometer to the banks of a waterfall close to the Myanmar border, where Dave and I started sifting through leaf litter and beating vegetation in search of beetles and spiders.

Several patches of leaf litter yielded a small arachnid that looked like a tick or a mite but was actually a very primitive member of the harvestmen order, a group often referred to as the Daddy Long Legs. Unlike most other members of this order, which have evolved long, spindly legs that help them pursue prey or evade predators, this smaller, slower, more cryptic harvestman must seek protection under the cover of leaf litter. This new species is the first member of the suborder Cyphophthalmi documented from China.

- Jeremy Miller, Entomologist

August 29, 2006 — *Adaptations to the Cold*

When I woke up this morning and saw the clear sky, I knew this was the day I would finally get above 4,000 meters. The guides were a bit less enthusiastic than I was about the prospect of another day of climbing, but after a grueling three hours, we made it to the top of one of the snowfields, reaching a height of 4,050 meters. The plants here all have special adaptations for surviving in cold weather. Most grow very low to the ground, enabling them to avoid the wind and absorb the relative warmth of the sun-baked soil. When the soil is frozen, their roots are unable to absorb water from the ground, so they must be resistant to drought. To combat water evaporation, many plants have very small leaves with protective waxy or hairy surfaces. So far, I've seen two species of high-elevation ferns (an unexpected find), as well as gentians, saxifrages, heaths, louseworts, and wintergreens. One of these wintergreens may be a new species. Although its berries look nearly identical to those of a species just down-slope, its more pointed leaves and creeping growth form are distinctly different.

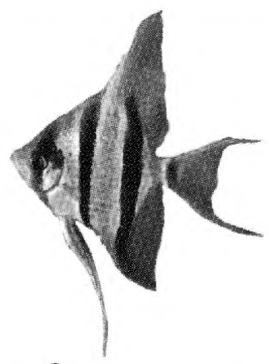
I would love to get up even higher, but I can't climb any further without crampons. One of our mountaineers did manage to get up to 4,700 meters yesterday, however, where she found an incredible snow-lotus (*Saussurea laniceps*). This plant has feather-like leaves that cover the stem, insulating it against the cold air. The flowers are deeply nested in pits at the top of the stem, and the stem itself is completely hollow, creating a cavity of relatively warm air.

- Peter Fritsch, Botanist

All programs are free with Academy admission unless otherwise noted.

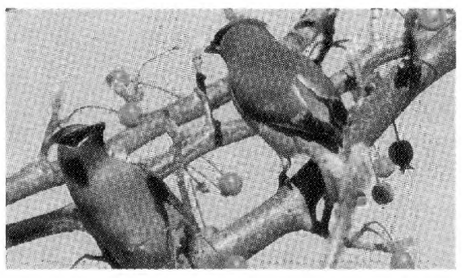
MARCH

Aquarium Highlights



Every Friday
10 am-Noon
Take a docent-led tour to learn about Steinhart Aquarium's fish, amphibians, snakes, and other reptiles. Docents will share funny stories and interesting facts about these animals, including surprising behavioral traits and unusual adaptations.

Bay Area Birds



Every Friday
1:00 pm
Discover the fascinating birds that live in the Bay Area, and learn about the places where you can find them.

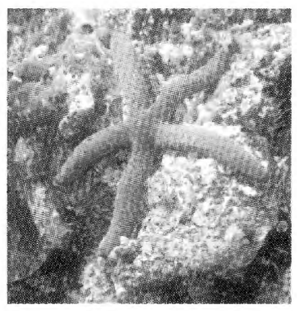
Story Time
Every Saturday
10:30 am
Explore nature with a story for children ages 3-5.

Blue Ocean
Every Saturday through March 24
1:00 pm
Dive into the incredible world of our blue planet, and learn about the world's oceans by exploring topics such as water currents, animal migrations, fisheries, and global warming.

Meet the Biologist
Every Saturday & Sunday (except Sunday, March 18)
2:00 pm
Meet an Academy biologist and discover how to care for aquarium creatures. Depending on the animal you visit, you may learn how to take and test water samples, check filters, clean tanks, or administer appropriate amounts of food.

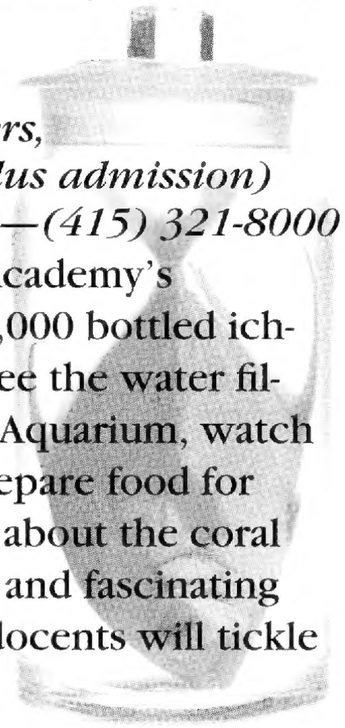
Family Nature Crafts:
A "You & Me" Experience for Adults with Children Ages 4-8
Every Sunday
10:30 am
FREE for Academy members
$2.00 per person for non-members
Reservations required—(415) 321-8000
Spend an hour together creating a unique nature-inspired craft project. Extend the fun with educational take-home information.

Sea Life Series



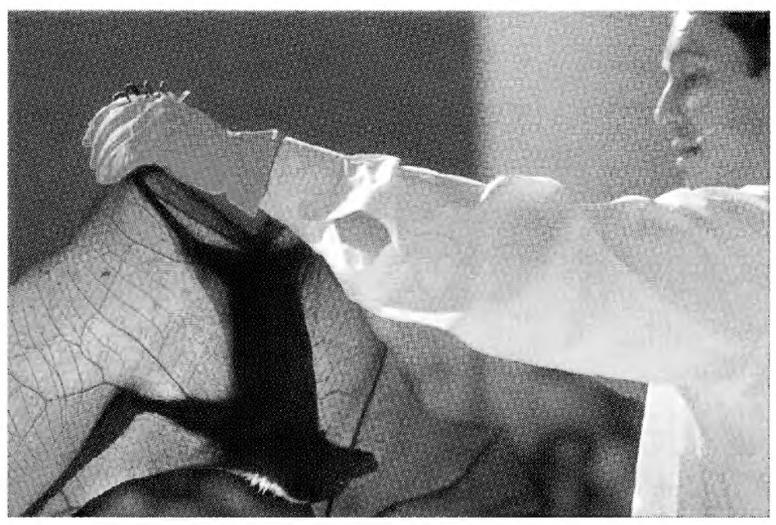
Every Sunday
1:00 pm
Examine the fascinating and diverse lives of ocean animals. Illustrated by slides or scientific specimens, these interactive discussions will cover topics such as communication in the ocean and aquatic parenting skills.

Behind-the-Scenes Fish Tours



Friday, March 9, Wednesday, March 14, & Friday, March 23
10:30 am-Noon
$10 Academy members,
$15 Non-members (plus admission)
Registration required—(415) 321-8000
Wander through the Academy's collection of over 200,000 bottled ichthyology specimens, see the water filtering systems for the Aquarium, watch Steinhart biologists prepare food for the animals, and learn about the coral rearing pods. This fun and fascinating tour led by Academy docents will tickle your curiosity.

Live Bat Encounter
Sunday, March 18
11:30 am & 2:00 pm
First-come first-serve basis. Free with museum admission. Tickets will be released on the main floor 20 minutes before each program.



Meet live bats from around the world, hear their high-pitched sound with a "bat detector," and learn about their habitats and nocturnal strategies. Special ambassadors will include an endangered golden bat as well as the largest bat in the world - the gigantic flying fox bat from Malaysia with a wingspan of almost six feet. Rob Mies, TV personality and Director of the Organization for Bat Conservation, will speak about the benefits of bats, why we need to save them, and what you can do to help.

Rockin' Reptiles

Saturday, March 31
1:00 pm
Join Academy interns as they share the natural history and conservation status of reptiles from around the world. You might meet an American alligator, ball python, rosy boa, or corn snake—and even get to touch it as well!

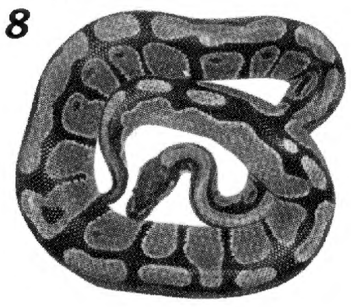
APRIL

Bay Area Birds
Every Friday
1:00 pm
See March description.

Story Time
Every Saturday (except April 14)
10:30 am
See March description.

Family Nature Crafts:
A "You & Me" Experience for Adults with Children Ages 4-8
Sunday, April 1, 22 and 29
10:30 am
See March description.

Rockin' Reptiles
Sunday, April 1; Saturday, April 7; Sunday, April 8
1:00 pm
See March description.



Fluid Fauna
Monday- Friday, April 2-6 and April 9-13
1:00 pm
Families! Come one and all to soak up knowledge about some of the most interesting animals on Earth—aquatic animals! Experience the wonder of watery habitats and be ready to get a little damp yourself.

Meet the Biologist
Tuesdays, April 3 and 10, Thursdays, April 5 and 12
2:00 pm
See March description.

Behind-the-Scenes Fish Tours
Wednesday, April 11 & Friday, April 13
10:30 am
See March description.

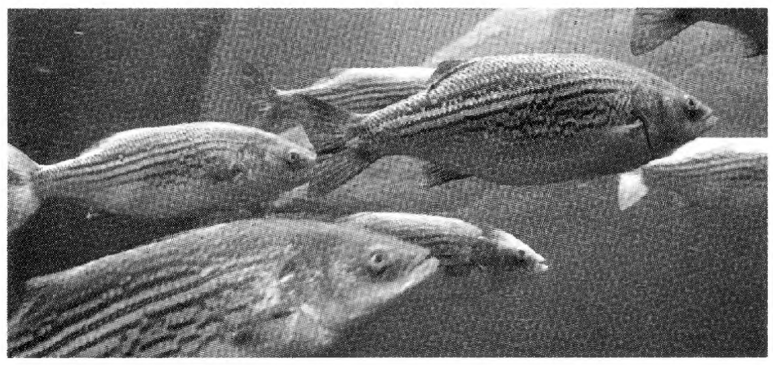
2007 Earth Day Weekend Celebration
Saturday, April 14 & Sunday, April 15
10:30 am-4:00 pm

Celebrate Earth Day at the Academy with 2 days of fun activities and programs designed for families. In addition to special programming, visitors will have the opportunity to interact with representatives of local conservation organizations and public agencies.

Art & Science *for Children Ages 4-8*
Saturday, April 14 & Sunday, April 15
10:30 am

Try your hand at Gyotaku, the Japanese art of fish printing.

The Secret Life of Your Dinner
Saturday, April 14 & Sunday April 15
12:00 pm

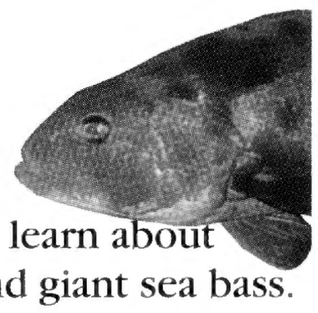


What's life like for ocean animals before they show up on our menu? Discover the bizarre and interesting life of lobsters, crabs, tuna, scallops and other seafood favorites. Learn about unusual ocean animals eaten in cultures around the world, and find out what their life is like before they get to the plate.

Discover, Celebrate and Protect
Saturday, April 14 & Sunday, April 15
1:00 pm

In celebration of Earth Day, learn ways in which we can all discover the wonders of the natural world and help to protect its treasures.

Meet the Biologist:
Giant Sea Bass Feeding
Saturday, April 14
2:00 pm



Join Steinhart Aquarium biologist Dave Chan and learn about the Academy's 150-pound giant sea bass.

Meet the Biologist: *Coral Reef Feeding*
Sunday, April 15
2:00 pm

Watch the Academy's coral reef residents eat their lunch and learn about coral reef communities and conservation.

Stargazing at the San Francisco Botanical Garden—Early Spring Skies
Friday, April 20 **8:00 pm**
(10 minutes after sunset) until 9:30 pm

Members $8 (family $13)
nonmembers $12 ($18)

Venus, Saturn, and a waxing crescent Moon provide splendid sights just after sunset, whetting our appetites for more as the sky slowly darkens. Then, as the stars appear, we see the constellations of Spring – Leo the Lion, Cancer the Crab, and the Big Dipper at its highest, pointing the way to the bright stars Arcturus and Spica. Bing Quock of the Academy's Morrison Planetarium leads a laser-guided tour of the constellations on the grounds of the SF Botanical Garden in Golden Gate Park and turns a telescope toward the planets, the Moon, and star clusters. If you're lucky, you might even spot a satellite or a meteor! Dress warmly and bring binoculars, if you have them. Classroom presentation provided in the event of inclement weather.

NOTE: *This program is offered in partnership with the San Francisco Botanical Garden at Strybing Arboretum. Fees are payable to the SF Botanical Garden. For further information, please call the Botanical Garden's Education Department at (415) 661-1315, ext. 300.*

Sea Life Series
Sundays, April 22 and 29
1:00 pm

See March description.

Blue Ocean
Saturday, April 28
1:00 pm

See March description.

Astronomy Day at the Academy
Saturday, April 21 **10:30 am-4:00 pm**

Join the Academy and local amateur astronomers in celebrating the joys of skywatching and exploring the Universe on Astronomy Day! Since 1973, museums, planetaria, and astronomy clubs have shared their enthusiasm for the oldest science with the public on Astronomy Day. The Academy will host activities for kids and provide astronomy & science door prizes.

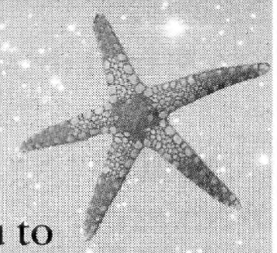
Art & Science *for Children Ages 4-8*
Saturday, April 21
10:30 am

See the stars shine! Make a constellation postcard to take home with you.

The Sky Tonight
Saturday, April 21
1:00 pm

Morrison Planetarium's Bing Quock will guide you on a tour of the night sky for this evening's skywatching. Weather-permitting, amateur astronomy clubs will hold "star parties" for the public tonight, giving you an opportunity to look through a telescope at the waxing crescent Moon, the planets Venus and Saturn, or "deep-sky" objects among the constellations.

Meet the Biologist: Space Creatures
Saturday, April 21
2:00 pm



During Astronomy Day, Steinhart Aquarium biologists will introduce you to sea stars, the starry flounder and other creatures with space-inspired names.

22nd BioForum Series for Science Educators

Coral Reefs: How They Survive—Will They Survive?
Saturday, April 21 **8:30am-4:00pm**
California Academy of Sciences and Zeum, San Francisco

Members $30; non-members $25; students $15
Call (415) 321-8000 to pre-register

Symbiosis plays a key role in the formation of an important marine ecosystem, the coral reef. The symbiosis between corals and their zooxanthellae is highly susceptible to changes in environmental factors such as elevated seawater temperature. Scientists will discuss how global warming has impacted coral reefs worldwide and what the future holds for these biodiversity wonders of the ocean. The Steinhart Aquarium's current and future coral reef exhibits will be a featured part of this BioForum.

Moderator: Monica Medina, Ph.D., University of California, Merced

MAY

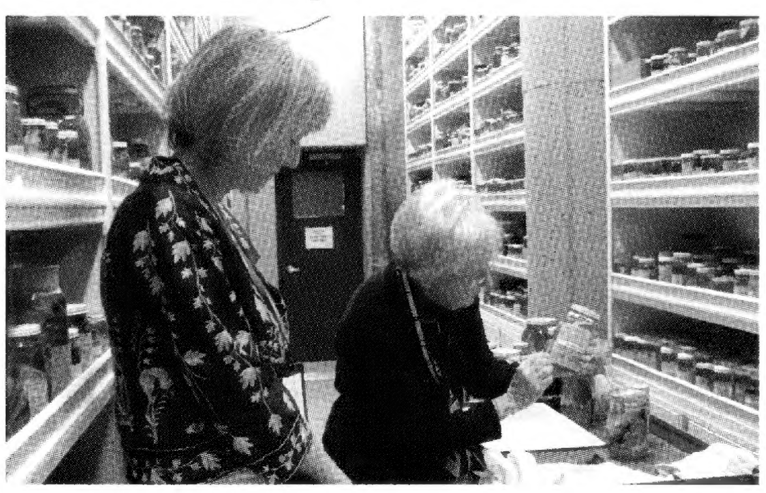
Story Time
Every Saturday
10:30 am
See March description.

Blue Ocean
Every Saturday
1:00 pm
See March description.

Sampling from the Sea
Every Sunday through May 20
1:00 pm-3:00 pm
In May, the Academy will highlight sustainable food options associated with the ocean. Come in and enjoy a savory selection from the sea!

Meet the Biologist
Every Saturday & Sunday
2:00 pm
See March description.

Behind the Scenes Fish Tours
Wednesday, May 9 & Friday, May 11
10:30 am-Noon
See March description.



Join Howard the Gi-ANT at a Giants Game!

Wednesday, May 9 **12:35 pm**

Before watching the San Francisco Giants take on the New York Mets, students can learn about the natural world just beyond the ballpark.

Visit calacademy.org for special prices for groups of students and teachers and for Academy members.

Migratory Bird Day
Saturday, May 12 **10:30 am-4:00 pm**

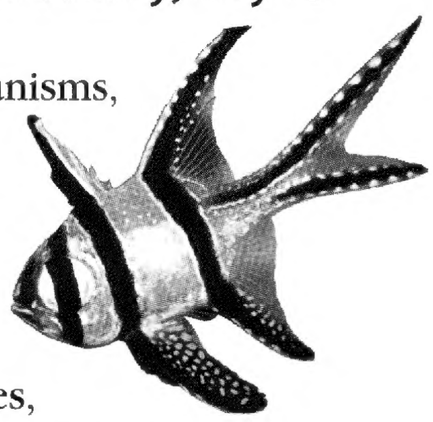
Celebrate bird migration at the Academy through a variety of programs designed for families and young children to enjoy.

Art & Science *for Children Ages 4-8*
Saturday, May 12
10:30 am
Using paper, crayons and scissors, create your own migratory bird to take home.

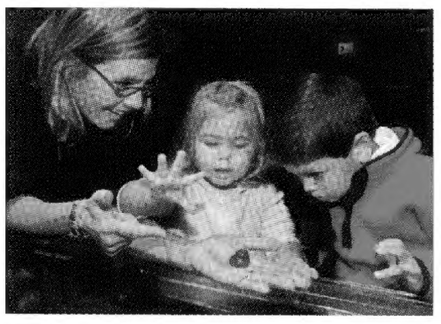
Migration Madness: California's Birds on the Move
Saturday, May 12
1:00 pm
Look into the incredible lifestyles and travel schedules of some of California's migrating birds, see real bird specimens from the Academy's research collections, and learn about some of the Bay Area's prime migratory bird watching locations.

MOTHER'S DAY WEEKEND

Mother's Day Off
Saturday, May 12 and Sunday, May 13
2:00 pm
In many aquatic organisms, parenting is handled largely by the males of the species. Steinhart Aquarium biologists will introduce you to seahorses, cardinalfish, and other species where the males do much of the work.

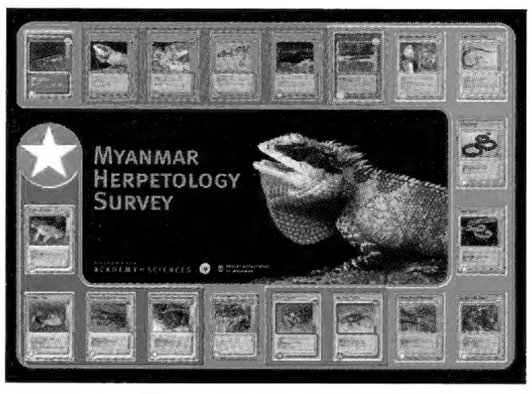


Steinhart Aquarium: A Mother's Perspective
Sunday, May 13
1:00 pm
Discover fun facts about some of our aquarium inhabitants and learn about mothers and their offspring in nature.



Herpetology Hoopla
Learn about the reptiles and amphibians of Myanmar, the threats they face, and strategies to save them as you play this fun, interactive card game developed by the California Academy of Sciences for students in grades 4 through 8. In 1997, scientists from the Academy began surveying the reptiles and amphibians of Myanmar. When the project began, about 350 species of reptiles and amphibians had been recorded from Myanmar. By the time the project is completed, the number is expected to increase to 500 species.

Teacher members, through National Science Foundation grant support, can order a class set at no charge by calling (415) 321-8105. Members can purchase the game on the web at www.calacademy.org/education/ or at the Academy store.



The State of the Ocean's Animals
Wednesday, March 28
at 8:00 pm on KQED
(check local TV listings)
The California Academy of Sciences, in partnership with the American Association for the Advancement of Sciences, is one of several institutions collaborating to support the conservation messages of the Journey to Planet Earth PBS series.

The State of the Ocean's Animals will take a hard look at the threats to the world's ocean animals including global warming, over-fishing, and habitat destruction. Case studies will feature penguins, sea otters, sharks, whales, dolphins, sea turtles, and wild salmon. Learn why nearly half of the world's marine animals may face extinction over the next twenty-five years, and what you can do to make a difference.

"Science in Action" *Reborn*

From 1952-1966, the Academy delighted millions of viewers with "Science in Action," one of the first educational nature series on television. Now "Science in Action" is back—reborn as an audio program on the Academy website! In each installation, broadcast veteran Jerry Kay takes the listener on an exploration of nature, interviewing Academy scientists aboout topics ranging from seahorse reproduction and meteor showers to feathered dinosaurs and chocolate. Visit **www.calacdemy.org/podcasts** to start listening!

ACADEMY LECTURES

Location: Sequoia Boardroom, California Academy of Sciences
Tickets: Free for Academy members, $8 non-members.
Tickets can be purchased by calling (415) 321-8000 or at the door, when available.

From the Philippines to the Golden Gate: Foundations for the New Steinhart Aquarium

Terry Gosliner, Senior Curator of Invertebrate Zoology and Senior Officer for Collaborative Programs, California Academy of Sciences; Meg Burke, Director of Education, California Academy of Sciences; and Bart Shepherd, Steinhart Aquarium Curator, California Academy of Sciences
Tuesday, March 20 2:00 pm & 7:30 pm

Known for the highest marine biodiversity in the world with over 500 coral species and 2,000 fish species, the coral reefs of the Philippines will be featured in a 212,000-gallon tank in the new Academy. In 2006, a multidisciplinary Academy team led an expedition to the Philippines to strengthen the foundations for this new exhibit. With stunning underwater imagery captured on the trip, Terry Gosliner will describe the diversity of Philippine reefs and how his research there over the years led to the collaborations that made this project possible. Meg Burke will detail the integration of education, research, and conservation from a community-based perspective. And Bart Shepherd will address the art and science of translating wild reefs into a realistic and sustainable captive living reef.

MORE LECTURES ON PAGE 19

Cougars and Carnivores of Yellowstone

Howard Quigley, Ph.D., Executive Director & Senior Ecologist, Beringia South
Tuesday, April 17 2:00 pm & 7:30 pm

Howard Quigley's field studies have focused on a broad range of large mammals, including jaguars in the Brazilian Pantanal, Siberian tigers in the Russian Far East, and the giant panda in China. Most recently, Quigley has been working in the western United States and has led studies on cougar ecology and large carnivore interactions in the Yellowstone area. In this lecture, Quigley will present an overview of cougar natural history and conservation challenges confronting cougars in the West, as well as the results of recent scientific studies from Yellowstone. The re-introduction of wolves, the expanding grizzly bear population, and the broad distribution of black bears and cougars in Yellowstone provide an unprecedented opportunity to study the interaction of these species and develop long term conservation strategies.

Birds and Bears of Churchill, Manitoba: A Wildlife Photographer's Vision

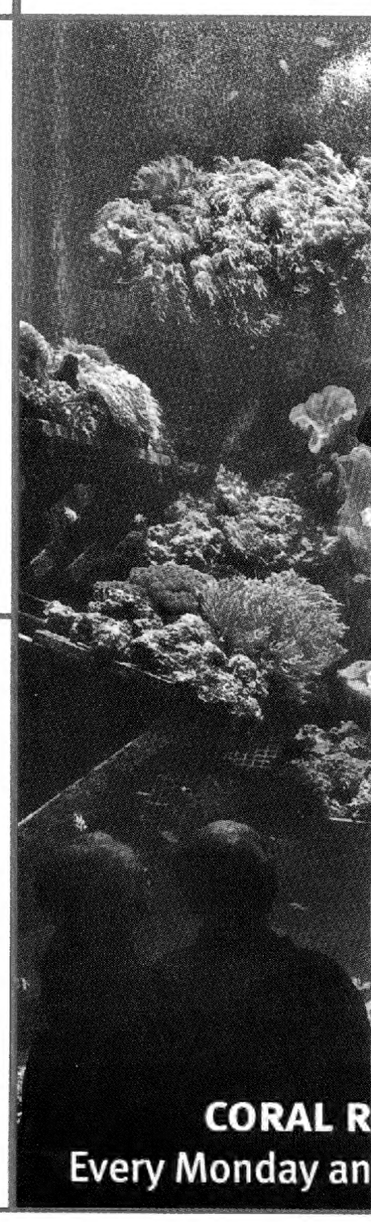
Eleanor Briccetti, Wildlife Photographer
Tuesday, May 15 2:00 pm & 7:30 pm

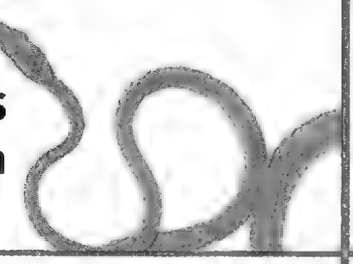
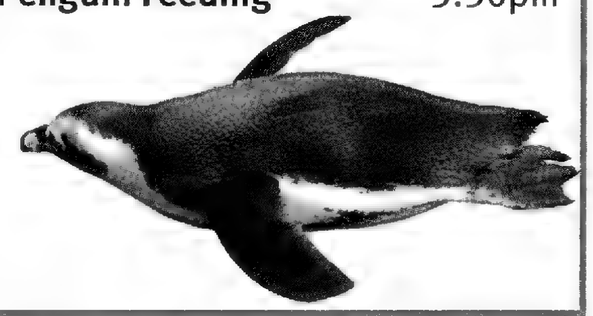
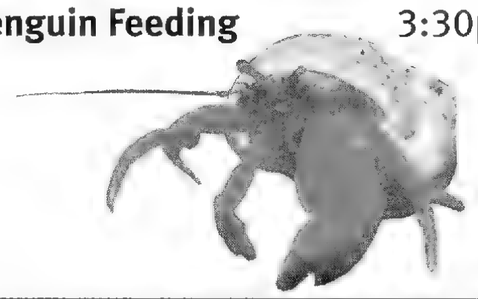
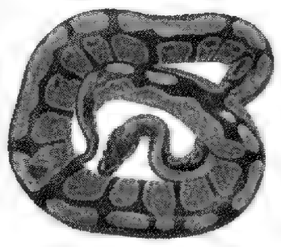
Although most famous for its polar bears, Churchill is also a prime location for many species of native and migratory birds, such as Arctic tern, Hudsonian godwit, parasitic yeager, and Pacific loon. Eleanor Briccetti's eye and talent for capturing wildness gives life to her work that is trumped only by the tales that accompany these photographic gems. Included in this northern journey are Arctic foxes, a release of rehabilitated snowy owls into the wild, and polar bears in various poses as they await the freezing of Hudson Bay and the chance to feed on fur seals.

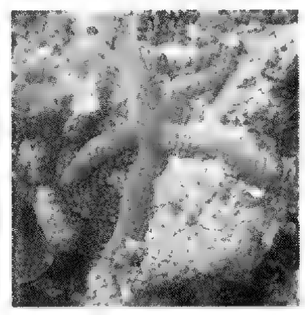
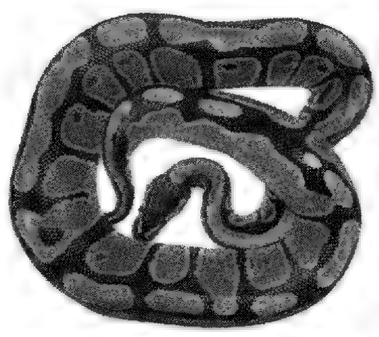
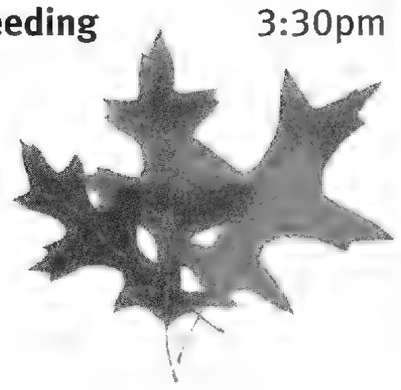
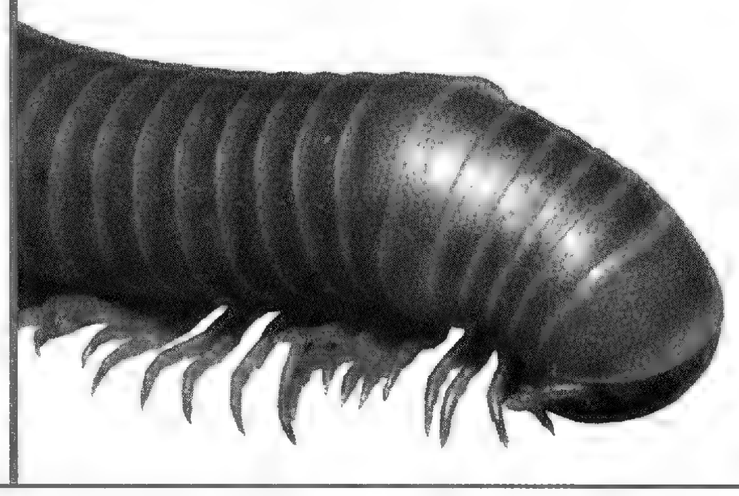
MARCH

Please see Programs on page 5 and Highlights on pages 6-9 for a full description. For more information, check our website: *www.calacademy.org*.

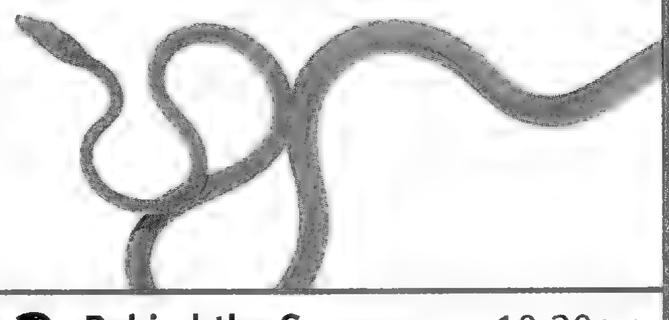
Visit the **NATURE NEST**
Every Day 10am-5pm

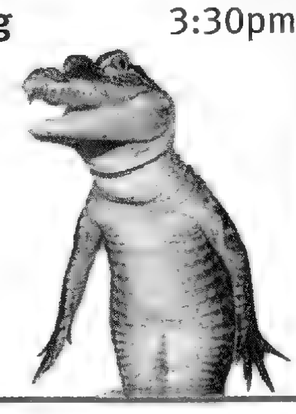
Sunday	Monday	Tuesday	Wedn
4 Family Nature Crafts 10:30am Penguin Feeding 11:00am Sea Life Series 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm	**5** Penguin Feeding 11:00am Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm	**6** Penguin Feeding 11:00am Penguin Feeding 3:30pm	**7** Penguin Feed Coral Reef Ca Penguin Feed
11 Family Nature Crafts 10:30am Penguin Feeding 11:00am Sea Life Series 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm	**12** Penguin Feeding 11:00am Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm	 **PENGUIN FEEDING** Every Day 11am & 3:30pm	**14** Behind-the-S Fish Tours Penguin Feed Coral Reef Ca Penguin Feed
18 Family Nature Crafts 10:30am Penguin Feeding 11:00am Live Bat Encounter 11:30am Sea Life Series 1:00pm Live Bat Encounter 2:00pm Penguin Feeding 3:30pm	**19** Penguin Feeding 11:00am Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm Dean Lecture 7:30pm **JCC SF*	**20** Penguin Feeding 11:00am Academy Lecture 2:00pm Penguin Feeding 3:30pm Academy Lecture 7:30pm	 **CORAL R** Every Monday an
25 Family Nature Crafts 10:30am Penguin Feeding 11:00am Sea Life Series 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm	**26** Penguin Feeding 11:00am Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm	**27** Penguin Feeding 11:00am Penguin Feeding 3:30pm	

esday	Thursday	Friday	Saturday
	**1** Penguin Feeding 11:00am Penguin Feeding 3:30pm	**2** Highlights of the Aquarium 10:00am Penguin Feeding 11:00am Bay Area Birds 1:00pm Snake Feeding 2:00pm Penguin Feeding 3:30pm **SNAKE FEEDINGS** Every Friday 2pm 	**3** Story Time 10:30am Penguin Feeding 11:00am Blue Ocean 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm
ng 11:00am taking 2:00pm ng 3:30pm	**PENGUIN FEEDING** Every Day 11am & 3:30pm 	**9** Highlights of the Aquarium 10:00am Behind-the-Scenes Fish Tours 10:30am Penguin Feeding 11:00am Bay Area Birds 1:00pm Snake Feeding 2:00pm Penguin Feeding 3:30pm	**10** Story Time 10:30am Penguin Feeding 11:00am Blue Ocean 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm 
enes 10:30am ng 11:00am taking 2:00pm ng 3:30pm 	**15** Penguin Feeding 11:00am Penguin Feeding 3:30pm 3rd Thursday 5:00pm 3rd THURSDAYS CLOWNFISH, CORALS & COCKTAILS CONVERGE	**16** Highlights of the Aquarium 10:00am Penguin Feeding 11:00am Bay Area Birds 1:00pm Snake Feeding 2:00pm Penguin Feeding 3:30pm 	**17** Story Time 10:30am Penguin Feeding 11:00am Blue Ocean 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm
 EF CARETAKING Wednesday 2pm	**22** Penguin Feeding 11:00am Penguin Feeding 3:30pm	**23** Highlights of the Aquarium 10:00am Behind-the-Scenes Fish Tours 10:30am Penguin Feeding 11:00am Bay Area Birds 1:00pm Snake Feeding 2:00pm Penguin Feeding 3:30pm	**24** Story Time 10:30am Penguin Feeding 11:00am Blue Ocean 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm
	29 Penguin Feeding 11:00am Penguin Feeding 3:30pm 	**30** Highlights of the Aquarium 10:00am Penguin Feeding 11:00am Bay Area Birds 1:00pm Snake Feeding 2:00pm Penguin Feeding 3:30pm	**31** Story Time 10:30am Penguin Feeding 11:00am Rockin' Reptiles 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm 

Sunday	Monday	Tuesday	Wedn
1 Family Nature Crafts 10:30am Penguin Feeding 11:00am Rockin' Reptiles 1:00pm Penguin Feeding 3:30pm 	**2** Penguin Feeding 11:00am Fluid Fauna 1:00pm Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm 	**3** Penguin Feeding 11:00am Fluid Fauna 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm	**4** Penguin Feed Fluid Fauna Coral Reef Ca Penguin Feed 
8 Penguin Feeding 11:00am Rockin' Reptiles 1:00pm Penguin Feeding 3:30pm 	**9** Penguin Feeding 11:00am Fluid Fauna 1:00pm Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm	**10** Penguin Feeding 11:00am Fluid Fauna 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm 	**11** Behind-the-S Fish Tours Penguin Feed Fluid Fauna Coral Reef Ca Penguin Feed
15 Art & Science 10:30am Penguin Feeding 11:00am The Secret Life of Your Dinner 12:00pm Discover, Celebrate, and Protect 1:00pm Meet the Biologist 2:00pm Penguin Feeding 3:30pm **EARTH DAY**	**16** Penguin Feeding 11:00am Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm Dean Lecture 7:30pm *JCC SF	**17** Penguin Feeding 11:00am Academy Lecture 2:00pm Penguin Feeding 3:30pm Academy Lecture 7:30pm	**18** Penguin Feed Coral Reef Ca Penguin Feed
22 Family Nature Crafts 10:30am Penguin Feeding 11:00am Sea Life Series 1:00pm Penguin Feeding 3:30pm		**24** Penguin Feeding 11:00am Penguin Feeding 3:30pm	**PENGUIN FEEDI** Every Day 11am &
29 Family Nature Crafts 10:30am Penguin Feeding 11:00am Sea Life Series 1:00pm Penguin Feeding 3:30pm 	**30** Penguin Feeding 11:00am Coral Reef Caretaking 2:00pm Penguin Feeding 3:30pm Conversations at the Herbst 8:00pm *Herbst Theatre		

esday		Thursday		Friday		Saturday	
ng	11:00am	**5** Penguin Feeding	11:00am	**6** Penguin Feeding	11:00am	**7** Story Time	10:30am
	1:00pm	Fluid Fauna	1:00pm	Bay Area Birds	1:00pm	Penguin Feeding	11:00am
etaking	2:00pm	Meet the Biologist	2:00pm	Fluid Fauna	1:00pm	Rockin' Reptiles	1:00pm
ng	3:30pm	Penguin Feeding	3:30pm	Snake Feeding	2:00pm	Penguin Feeding	3:30pm
				Penguin Feeding	3:30pm		
Lenes	10:30am	**12** Penguin Feeding	11:00am	**13** Behind-the-Scenes Fish Tours	10:30am	**14** Art & Science	10:30am
ing	11:00am	Fluid Fauna	1:00pm	Penguin Feeding	11:00am	Penguin Feeding	11:00am
	1:00pm	Meet the Biologist	2:00pm	Bay Area Birds	1:00pm	The Secret Life of Your Dinner	12:00pm
etaking	2:00pm	Penguin Feeding	3:30pm	Fluid Fauna	1:00pm	Discover, Celebrate, and Protect	1:00pm
ing	3:30pm			Snake Feeding	2:00pm	Meet the Biologist	2:00pm
				Penguin Feeding	3:30pm	Penguin Feeding	3:30pm
ing	11:00am	**19** Penguin Feeding	11:00am	**20** Penguin Feeding	11:00am	**21** BioForum	8:30am
etaking	2:00pm	Penguin Feeding	3:30pm	Bay Area Birds	1:00pm	Art & Science	10:30am
ing	3:30pm	3rd Thursday	5:00pm	Snake Feeding	2:00pm	Story Time	10:30am
				Penguin Feeding	3:30pm	Penguin Feeding	11:00am
				Stargazing	8:00pm	The Sky Tonight	1:00pm
				** SF Botanical Gardens*		Meet the Biologist	2:00pm
						Penguin Feeding	3:30pm
NG		**27** Penguin Feeding	11:00am	**28** Story Time	10:30am		
3:30pm		Bay Area Birds	1:00pm	Penguin Feeding	11:00am		
		Snake Feeding	2:00pm	Blue Ocean	1:00pm		
		Penguin Feeding	3:30pm	Penguin Feeding	3:30pm		

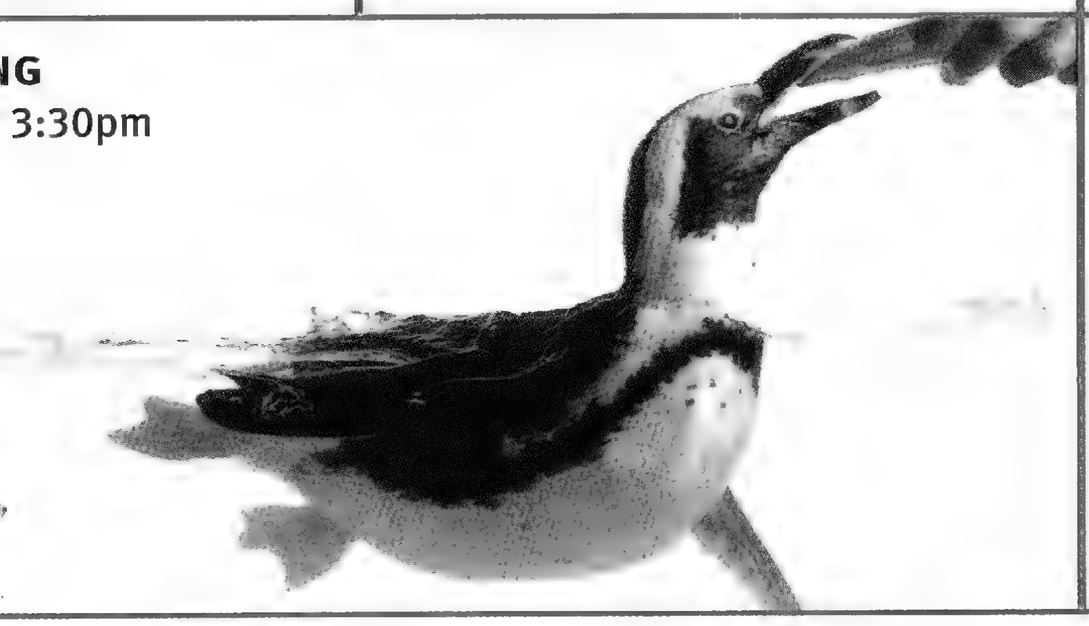


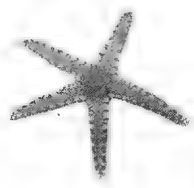


3rd THURSDAYS
CLOWNFISH, CORALS & COCKTAILS CONVERGE

EARTH DAY

ASTRONOMY DAY





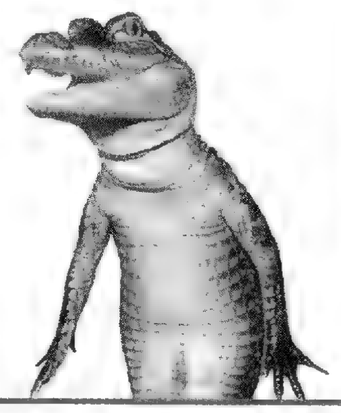
APRIL

Please see Programs on page 5 and Highlights on pages 6-9 for a full description. For more information, check our website: *www.calacademy.org*.

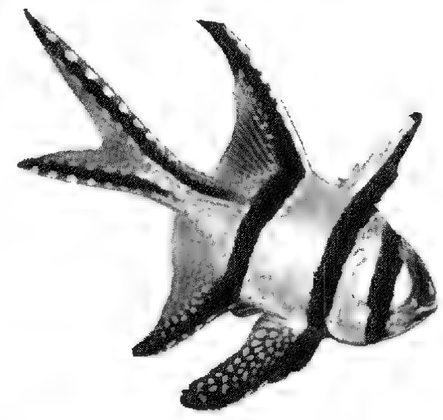
MAY

Sunday	Monday	Tuesday	Wedn

Please see Programs on page 5 and Highlights on pages 6-9 for a full description. For more information, check our website: *www.calacademy.org*.

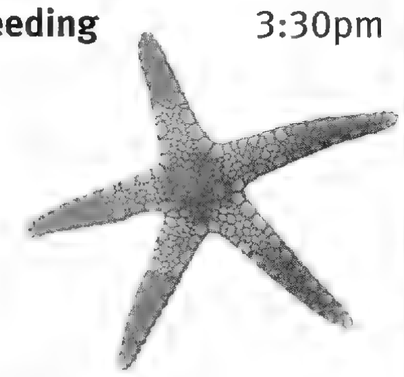


1
- Penguin Feeding 11:00am
- Penguin Feeding 3:30pm



2
- Penguin Feed
- Coral Reef Car
- Penguin Feed

6
- Penguin Feeding 11:00am
- Sampling from the Sea 1:00pm
- Meet the Biologist 2:00pm
- Penguin Feeding 3:30pm



7
- Penguin Feeding 11:00am
- Coral Reef Caretaking 2:00pm
- Penguin Feeding 3:30pm
- Dean Lecture 7:30pm *JCC SF

8
- Penguin Feeding 11:00am
- Penguin Feeding 3:30pm
- Conversations at the Herbst 8:00pm *Herbst Theatre

9
- Behind the Sc Fish Tours
- Penguin Feed
- Coral Reef Car
- Penguin Feed

GIA

13
- Penguin Feeding 11:00am
- Sampling from the Sea 1:00pm
- Steinhart Aquarium: A Mother's Perspective 1:00pm
- Meet the Biologist 2:00pm
- Mother's Day Off 2:00pm
- Penguin Feeding 3:30pm

MOTHERS' DAY

14
- Penguin Feeding 11:00am
- Coral Reef Caretaking 2:00pm
- Penguin Feeding 3:30pm

15
- Penguin Feeding 11:00am
- Academy Lecture 2:00pm
- Penguin Feeding 3:30pm
- Academy Lecture 7:30pm

16
- Penguin Feedi
- Coral Reef Car
- Penguin Feedi

20
- Penguin Feeding 11:00am
- Sampling from the Sea 1:00pm
- Meet the Biologist 2:00pm
- Penguin Feeding 3:30pm

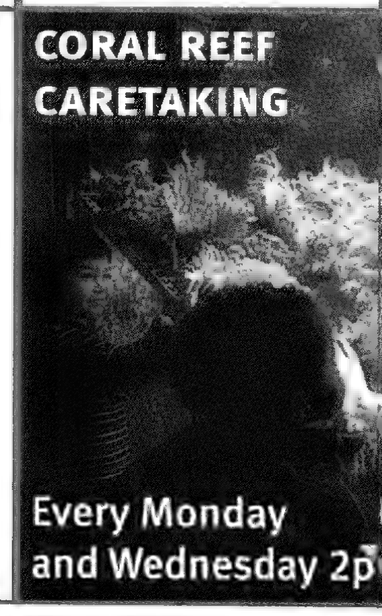
22
- Penguin Feeding 11:00am
- Penguin Feeding 3:30pm

23
- Penguin Feedi
- Coral Reef Car
- Penguin Feedi

27
- Penguin Feeding 11:00am
- Meet the Biologist 2:00pm
- Penguin Feeding 3:30pm

28
- Penguin Feeding 11:00am
- Coral Reef Caretaking 2:00pm
- Penguin Feeding 3:30pm

29
- Penguin Feeding 11:00am
- Penguin Feeding 3:30pm



esday

ing 11:00am
etaking 2:00pm
ing 3:30pm

enes 10:30am

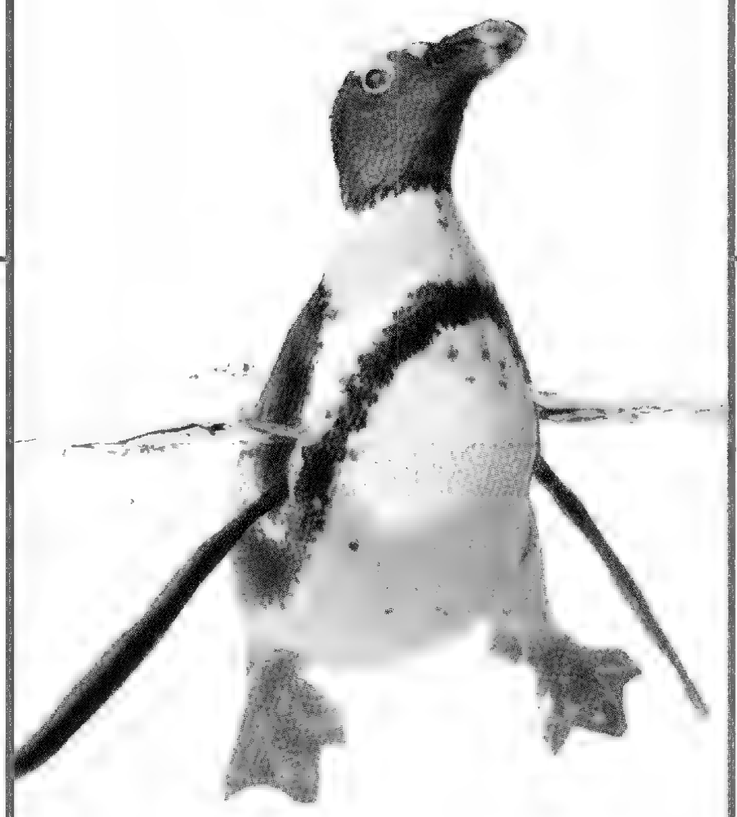
ing 11:00am
etaking 2:00pm
ing 3:30pm

NTS

ng 11:00am
etaking 2:00pm
ng 3:30pm

Thursday

PENGUIN FEEDING
Every Day 11am & 3:30pm



17
Penguin Feeding 11:00am
Penguin Feeding 3:30pm
3rd Thursday 5:00pm

3rd THURSDAYS
CLOWNFISH, CORALS & COCKTAILS CONVERGE

24
Penguin Feeding 11:00am
Penguin Feeding 3:30pm

31
Penguin Feeding 11:00am
Penguin Feeding 3:30pm

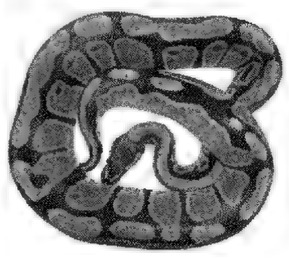
Friday

4
Penguin Feeding 11:00am
Snake Feeding 2:00pm
Penguin Feeding 3:30pm

SNAKE FEEDINGS
Every Friday
2pm

11
Behind-the-Scenes Fish Tours 10:30am
Penguin Feeding 11:00am
Snake Feeding 2:00pm
Penguin Feeding 3:30pm

18
Penguin Feeding 11:00am
Snake Feeding 2:00pm
Penguin Feeding 3:30pm



SNAKE FEEDINGS
Every Friday
2pm

25
Penguin Feeding 11:00am
Snake Feeding 2:00pm
Penguin Feeding 3:30pm

Saturday

5
Story Time 10:30am
Penguin Feeding 11:00am
Blue Ocean 1:00pm
Meet the Biologist 2:00pm
Penguin Feeding 3:30pm

12
Art & Science 10:30am
Story Time 10:30am
Penguin Feeding 11:00am
Blue Ocean 1:00pm
Migration Madness 1:00pm
Meet the Biologist 2:00pm
Mother's Day Off 2:00pm
Penguin Feeding 3:30pm

MIGRATORY BIRD DAY

19
Story Time 10:30am
Penguin Feeding 11:00am
Blue Ocean 1:00pm
Meet the Biologist 2:00pm
Penguin Feeding 3:30pm

26
Story Time 10:30am
Penguin Feeding 11:00am
Blue Ocean 1:00pm
Meet the Biologist 2:00pm
Penguin Feeding 3:30pm

SIGN UP FOR eNews

http://www.calacademy.org/enews/subscribe.html

Madagascar

Appreciating what can be Saved

Giraffe-necked weevil.

Dr. Chris Andrews picked his way through the undergrowth as noiselessly as possible, scanning the forest for the cause of his guide's excited whispers. Andrews, the Associate Executive Director of the Academy and Director of Steinhart Aquarium, was visiting Madagascar for the first time, and the much anticipated trip was off to a very auspicious start. Perched in a tree not 25 feet away, two black and white indri lemurs were lazily chewing leaves in the early morning sunshine. Suddenly, one of the indri called out, seemingly responding to another group of lemurs that were vocalizing off in the distance. The sound was haunting and ear-splitting, a cacophonous cross between a cat screaming and a San Francisco fire truck. After a few minutes, apparently satisfied that it had done what was necessary, the indri returned to its breakfast. The scene was powerful and utterly unique—like over 90% of the island's other mammals, reptiles, and amphibians, indri lemurs cannot be found anywhere else on Earth.

Situated about 200 miles off the coast of East Africa, Madagascar is the fourth largest island in the world. Because it has been isolated from other land masses for over 160 million years, the island contains an extremely high number of endemic species—plants and animals that cannot be found anywhere else on Earth. Nearly 13,000 species of plants and vertebrate animals are found exclusively on Madagascar. Tragically, less than 10 percent of the island's original habitat is still intact, and a number of its unique species are at risk. Forty-five animals that recently inhabited the island are now extinct, and nearly 200 others—including the indri—are threatened or endangered.

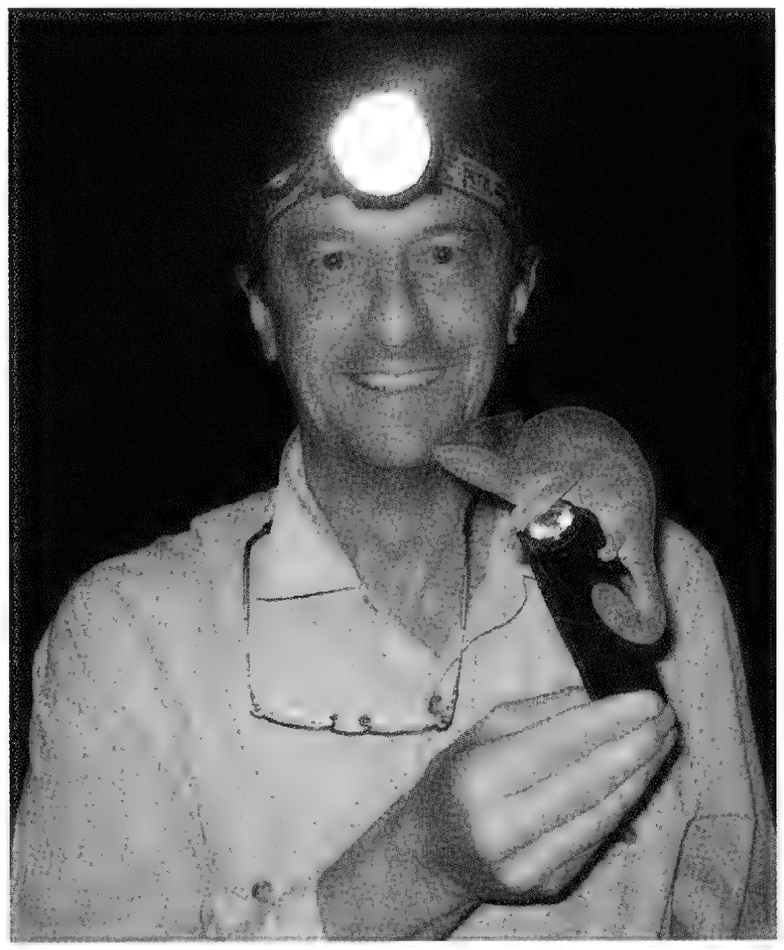
Since 1998, the Academy has been sending scientists to Madagascar to study the island's unique biodiversity. Over the past nine years, Academy entomologists, botanists, herpetologists, and invertebrate zoologists have identified more than a thousand new species from the island and its surrounding waters. Instead of studying only larger mammals and birds to identify areas of conservation importance, the Academy's scientists are documenting the diversity and range of much smaller animals and plants to create a comprehensive map of biodiversity distribution. This map will help officials decide which areas of the country are most critical to protect.

In November 2006, Andrews made the long journey to Madagascar to attend the official inauguration of the Academy's new "Bibikely Biodiversity Center" in the capital city of Antananarivo, otherwise known as Tana. A product of the passion and dedication of Academy scientists Brian Fisher, Frank Almeda, and others, this new research facility was built on land donated by the Malagasy government and is conveniently located next to the Malagasy Academy of Sciences and the zoo. Its primary focus is to provide a venue to study Madagascar's vanishing plants and invertebrate fauna ("Bibikely" means "small living things" in Malagasy), and—most importantly—to provide the training that will empower local biologists to achieve these goals. The center will also house the National Entomology Collection, a key piece of the island's biological puzzle.

When the new Academy opens in Golden Gate Park in 2008, a slice of this

rich biological puzzle will be on display in the Rainforests of the World exhibit, a four-story, glass-enclosed dome that will house rainforest habitats from Borneo, Madagascar, Costa Rica, and the Amazon. While in Madagascar, Andrews photographed habitats that will inform the construction of this new exhibit and established contacts for the acquisition of captive bred invertebrates, amphibians and reptiles. He also met with zoo staff regarding potential staff exchanges and joint projects with Steinhart Aquarium's biologists.

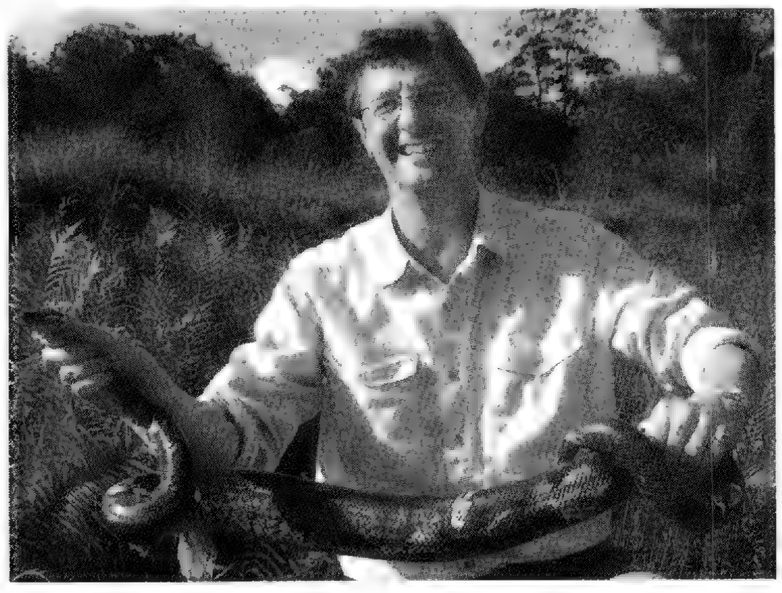
In order to collect relevant imagery, Andrews visited two areas within the network of national parks that is currently being developed by the Malagasy government. From Tana, he drove east for three hours toward Mantadia and Andasibe, the parks where he saw his first indri. For Andrews, the view from the car window on the way to the parks was almost as powerful as the scene he witnessed once he arrived, although for entirely different reasons. "As we dropped from the central highlands and headed toward Andasibe, the signs of massive deforestation became very apparent," says Andrews. The primary reasons for the deforestation, population growth and increasing demand for natural resources, were also apparent. "Between stretches of rice paddies, we passed through small villages consisting of very simple one-room homes with no running water. Very few had electricity, so wood was burned for light and heat. Rickshaws, locally known as bousse-bousse, were being pulled by wiry, barefoot men, and a type of cattle called zebus were pulling carts laden with wood or produce. Fires were burning in the surrounding hills, as more space was cleared for agriculture." Once inside the parks, however, the landscape changed dramatically. Besides the indri, Andrews spotted four other species of lemur in the dense, lush forest, along with colorful chameleons, geckos, and frogs, enormous orb weaver spiders, and a massive cloud of butterflies feeding on ripe fruit. Birds were also plentiful, including couas with their characteristic cuckoo-like calls, groundrollers, and some of the smaller vanga species.



Almost half of the world's chameleons (about 60 different species) are found only in Madagascar.

Andrews also visited Ranomafana National Park, located about nine hours south of Tana. The park was formed in 1991 after a new species of lemur, the golden bamboo lemur, was discovered there in 1986. During his excursions in Ranomafana, Andrews spotted this iconic lemur along with a number of its relatives. He also encountered a hedgehog-like mammal called a tenrec that uses an elongated snout to suck up insects, a catlike tree-dwelling civet, and a number of endemic reptiles and amphibians. During one of his treks, his guide pointed out a fern with hallucinogenic properties and a palm with Viagra-like attributes. "He had at least six children with at least two different wives, so my guess is that he started with the palm but now has more need for the fern," Andrews said with a laugh.

Of all the amazing things Andrews experienced in Madagascar, however, the most memorable was the opportunity to meet a mother aye-aye and her baby at the zoo in Tana, where he was actually allowed to enter the cage. The aye-aye is a spectacularly unusual, highly endangered lemur that has taken on almost mythical status as an ambassador for Madagascar's endangered species. "When the mother and her bleary eyed baby peered out from their nest box, the hair on the back of my neck stood on end, my hands trembled as I tried to take photographs, and I was at a loss for words," said Andrews. "It's easy to visit a once lush and luxuriant tropical country and become depressed, even overwhelmed, by the destruction and loss that has occurred," he added. "But I also saw some wonderful rainforest habitats in the national parks I visited, indicating a real commitment by the current government to conservation. My visit made me realize that conservation is not about mourning what has been lost, but rather is about celebrating and appreciating what can still be saved. Which is, after all, at the core of the Academy's mission to explore, explain and protect the natural world."



Andrews found some of his favorite animals in Madagascar.

Much of Madagascar's original forests are now gone, but the government is working to protect what is left.

Andrews was able to meet these aye-ayes in the zoo at Antananarivo.

March 3 ○

Full Moon in Leo. March's Full Moon, generally accompanying the Spring equinox, was named the "Deer Moon" by the Natchez, "Flower Time" by the Nez Perce, and the "Light Snow Moon" by the Cheyenne. A total lunar eclipse results from the Moon passing through Earth's shadow in space, turning the Full Moon a deep, coppery red. This is visible in its entirety from Africa, Europe, and the Middle East. For skywatchers in the central and eastern U.S. regions, the Moon rises already eclipsed just after sunset; observers on the West Coast won't see it.

March 11

New start of ***Daylight Saving Time*** (see box). Official U.S. time changes at 2:00 a.m. As a matter of convenience, set clocks ahead one hour at bedtime on the evening of the 10th, except in Arizona, Hawaii, American Samoa, Puerto Rico, and the U.S. Virgin Islands, where DST is stubbornly not observed.

March 18 ●

New Moon at 7:43 p.m. A partial solar eclipse is visible from Asia & Siberia, where up to 87% of the Sun's disk will be blocked from view by the silhouette of the New Moon. Not visible from the U.S. (except western Alaska). Occurring less than a day before perigee, or the Moon's closest approach to Earth, the new Moon's gravitational pull on Earth is stronger than usual, so higher tides are expected. Tomorrow night (the 19th), look for the first thin crescent Moon low in the west just after sunset. This sighting marks the beginning of the month Rabi-al-Awwal in the lunar-based Islamic calendar.

March 20

Spring equinox for the Northern Hemisphere at 5:08 p.m. Some calendars using Universal Time list this on the 21st, but correcting for the Pacific Time Zone changes the date. On this day, the Sun rises due east and sets due west. In the Southern Hemisphere, this is the Autumnal equinox.

April 2 ○

Full Moon in Virgo, near the bright star Spica. To the Dakotah Sioux, this was the "Moon to Go Paddling," to the Oto the "Little Frogs Croak Moon," and to the Choctaw the "Wildcat Moon."

April 17 ●

New Moon at 4:36 a.m. As in March, this New Moon occurs within hours of perigee, and so brings higher tides than usual. The sighting of the first crescent Moon at sunset on the 18th marks the start of the month Rabi-at-Thani in the Islamic calendar.

April 21

Astronomy Day, celebrated since 1973 on a Saturday in April or May nearest the first quarter Moon. Amateur and professional astronomers will be sharing their enthusiasm for skywatching with the public through events at museums, observatories, and planetaria.

April 22 ★

Peak of the ***Lyrid meteor shower,*** which usually averages about 15 meteors per hour, radiating from the stars of Lyra the Harp. The waxing crescent Moon will set before midnight, so moonlight won't interfere with meteor-watching during the recommended predawn hours.

May 2 ○

Full Moon in Libra, also known as the "Deep Water Moon" to the Kutenai, the "Panther Moon" to the Choctaw, and the "Summer Begins Moon" to the Ponca.

May 6 ★

Peak of the ***Eta Aquarid meteor shower***, averaging about 20 meteors per hour, radiating from the faint constellation Aquarius. Unfortunately, the light of the waning gibbous Moon interferes.

May 16 ●

New Moon at 12:27 p.m. The first crescent is not visible until tomorrow (the 17th) after sunset. Its sighting marks the start of the month Jumada-al-Oola in the Islamic calendar.

	SUNRISE	LOCAL NOON	SUNSET
MARCH 1	6:41 AM PST	12:22 PM PST	6:03 PM PST
APRIL 1	6:55 AM PDT	1:14 PM PDT	7:32 PM PDT
MAY 1	6:14 AM PDT	1:07 PM PDT	8:00 PM PDT

(Times are for San Francisco, CA, and will vary slightly for other locations.)

Here Comes Daylight Saving Time... But With a Difference

As usual, Daylight Saving Time begins this quarter, but there are changes, thanks to the Energy Policy Act of 2005. While we used to "spring forward" on the first Sunday in April and "fall back" on the last Sunday in October, this year we change that to the second Sunday in March (March 11th) and the first Sunday in November (November 4th), lengthening the Daylight Saving period by 4 weeks.

While the rationale is to make more use of available daylight late in the day and reduce energy use, critics have argued that adding an hour of daylight to the end of the workday simply takes it away from the beginning, forcing people to use more electricity in the morning and resulting in an unappreciable net saving of energy.

Concerns over public safety have also been expressed, based on observations from previous attempts to fiddle with Daylight Saving Time. In response to the "Energy Crisis" of the mid-1970s, Daylight Saving Time in the U.S. started on the first Sunday in January in 1974 and on the last Sunday in February in 1975. What was apparently overlooked was the fact that in some areas this meant that children were sent off to school in the dark, and traffic statistics indicated an increase in school bus accidents in the mornings. In Canada, records show a spike in the number of accidents on the work day following the change. In 1976, the change to Daylight Time was returned to April, and 31 years later, we're changing things again.

See page 7 for information on
STARGAZING AT THE SF BOTANICAL GARDENS

The Planets

Mercury
The smallest of the major planets is a predawn object at the beginning of the quarter, and even though Mercury reaches greatest western elongation on March 21st and is at its maximum separation from the Sun, its morning apparition is difficult to see. Reaching superior conjunction on May 2nd, it passes into the evening sky, leaping nearly straight up from the west after sunset, becoming easily visible at mid-month. The crescent Moon passes nearby on the mornings of March 16th and April 16th (very low in the east and difficult to see in the glow of the rising Sun), and on the evening of May 17th (easier, low in the west).

Venus
The brightest planet commands the evening sky, hanging high in the west after sunset, gradually passing from the stars of Pisces into those of Aries, Taurus, and Gemini. Watch for the Moon to pass by on the evenings of March 20th & 21st, April 19th, and – closest – on May 19th.

Mars
The Red Planet is a predawn object, low in the east before sunrise and gradually climbing higher, passing from Capricornus and Aquarius and into Pisces. It passes 1 degree from faint Neptune on March 24th and even closer to Uranus on April 28th, though both giant planets are not visible without telescopic aid. Much easier to see are the Moon's close encounters with Mars on the mornings of March 15th & 16th (on the 16th, the Moon is flanked by Mars and Mercury), April 13th & 14th, and May 12th & 13th.

Jupiter
The largest world in our solar system lingers against the stars of Ophiuchus all quarter, rising about 2:00 a.m. in early March and located due south at dawn. It rises about midnight in April, and by late-May, it rises during the first few hours of evening. Watch for the Moon nearby on March 11th, April 8th, and May 5th.

Saturn
Having passed opposition in February, the Ringed Planet is easily visible in the east just after sunset, located against the stars of Leo the Lion, where it lingers all year. It will rise a few minutes earlier and thus be seen slightly higher in the sky from night to night, and by May will be located high in the southwest at sunset. Watch for the Moon to pass very close by on the evenings of March 1st, March 28th, April 24th, and more distantly on May 21st.

DEAN LECTURES

Location: Kanbar Hall at the Jewish Community Center of San Francisco, 3200 California Street. Time: 7:30pm

Tickets are $4 at the door or by mail:

Dean Astronomy Lectures
California Academy of Sciences
875 Howard Street
San Francisco, CA 94103

New Worlds in the Making: Origins of Planets and Brown Dwarfs

March 19, 2007
Dr. Ray Jayawardhana
University of Toronto

Astronomers have detected over 200 planets around Sun-like stars, as well as hundreds of "brown dwarfs" too puny to light up as stars. Intriguingly, some brown dwarfs may harbor planetary companions. Astronomers are deciphering the birth and early evolution of planets and brown dwarfs using remarkable new observations and sophisticated computer simulations.

From Dust to Dust: The Shrouds of Stellar Birth and Death

April 16, 2007
Dr. Peter Tuthill
University of Sydney

The life cycle of most stars is bracketed at both ends by dust. From the spectacular flattened whirlpools feeding stellar births, to the dramatic plumes and shells cast by dying stars, new imaging technologies are delivering our first clear views into the crucibles of creation and destruction among the stars.

The Day the Sun Blew Up

May 7, 2007
Dr. Sten Odenwald
NASA Goddard Space Flight Center

In 1859, the biggest solar storm in recorded history rocked the Sun, causing major worldwide disruptions of telegraph service and reports of fires in every major city on Earth. What will happen when such a 'superstorm' comes again? This talk will explore the possible human and technology impacts of the next solar superstorm.

City Arts & Lectures presents
California Academy of Sciences

CONVERSATIONS AT THE HERBST 2007

*All events at the Herbst Theatre, 8 pm unless noted**

Tuesday, April 3, 2007
Annual Claire Matzger Lilienthal Distinguished Lecturer
VICE PRESIDENT AL GORE
An Inconvenient Truth
Hosted by John McCosker
*at the Masonic Center
SOLD OUT!

Monday, April 30, 2007
SHERWIN NULAND
Physician & Author
How We Die • How We Live
In conversation with Isabel Duffy

Tuesday, May 8, 2007
MICHAEL POLLAN
Journalist
The Omnivore's Dilemma
& MARION NESTLE
Nutritionist
What to Eat

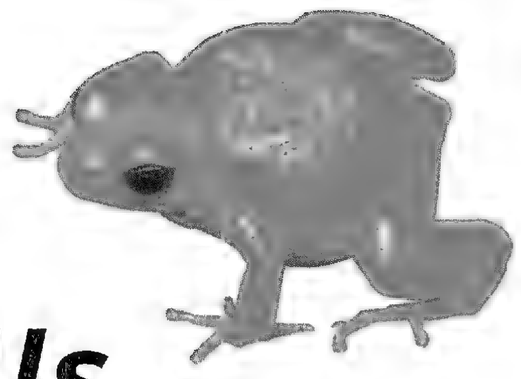
Wednesday, June 6, 2007
ZAHI HAWASS
Head of Egypt's Supreme Council of Antiquities
The Royal Tombs of Egypt • Mountains of the Pharaohs
In conversation with Carol Tang

This series is made possible, in part, by a grant from the Richard & Rhoda Goldman Fund, the Lilienthal Family Fund, and the Myers Family Fund.

CITY BOX OFFICE: 415-392-4400
Member: $17 each
Non-member: $19 each

More lectures on page 9

ENDANGERED RAINFOREST FROGS



A Fungus Among Us

Few animal exhibits intrigue Academy visitors more than close encounters with the rainforest frogs of Central America and Madagascar. From the amazing transformation that young tadpoles undergo to the powerful toxins some species harbor in their skins to fend off predators, their stories are engaging and awe-inspiring.

Unfortunately, many of their cousins' calls will never be heard by the Academy's guests, since their populations are declining toward extinction at an alarming rate. Since 1980, at least 129 species of frogs seem to have disappeared, and another 1,900 species are threatened with extinction. A laundry list of factors is contributing to their decline, including habitat loss, pollution, and global climate change. Now, a new culprit has been added to the list—an infectious disease called chytridiomycosis that is caused by an invasive fungus.

This fungus, *Batrachochytrium dendrobatidis*, was first identified in 1998 when scientists in both Panama and Australia witnessed its effects on hundreds of local amphibians. Since then, it has been identified in almost 150 species of amphibians and has been implicated in the losses of hundreds of species around the world. The fungus often travels through one of its hosts, the African clawed frog. Since 1939, clawed frogs have been distributed worldwide for the hobbyist trade and research studies, including pregnancy test developments. They are the primary amphibian subject for scientific experimentation for good reason: they are a hardy species with a strong resistance to disease. They can also tolerate large fluctuations in salinity, pH and temperature. Unfortunately, these same qualities make the frogs a menace as they spread to new frontiers. Escaping from laboratories and let loose by pet owners with a change of heart, they take over local waterways, eating some native amphibians and out-competing others for food. And while they can often tolerate chytridiomycosis, the disease is normally fatal for most other species.

In an attempt to help protect amphibian species that are at risk for chytridiomycosis, the International Zoo and Aquarium Captive Breeding Specialists Groups held meetings this summer to establish captive breeding plans for amphibians from Madagascar and Costa Rica. Their report called for more than 427 critically endangered species to be placed in "survival-assurance colonies." The IUCN (International Union for Conservation of Nature) has endorsed the proposal, which was developed after colleagues at the Atlanta Botanical Gardens, Zoo Atlanta, Houston Zoo and the El Nispero Zoo were successful in setting up colonies for 35 of Panama's at-risk frog species.

Steinhart Aquarium's biologists will be contributing to the effort by breeding and raising golden mantellas, small frogs that live in the rainforests of Madagascar. Tadpoles and young frogs are currently on display in the Science Now exhibit, where visitors can watch the animals as they grow. These frogs will eventually take up residence in the new Rainforests of the World exhibit in Golden Gate Park, which will open in late 2008. Breeding colonies of other endangered species from Madagascar and Costa Rica are also under consideration for inclusion in the new exhibit, where Steinhart's biologists hope to do their part to protect these peepers of the rainforest chorus.

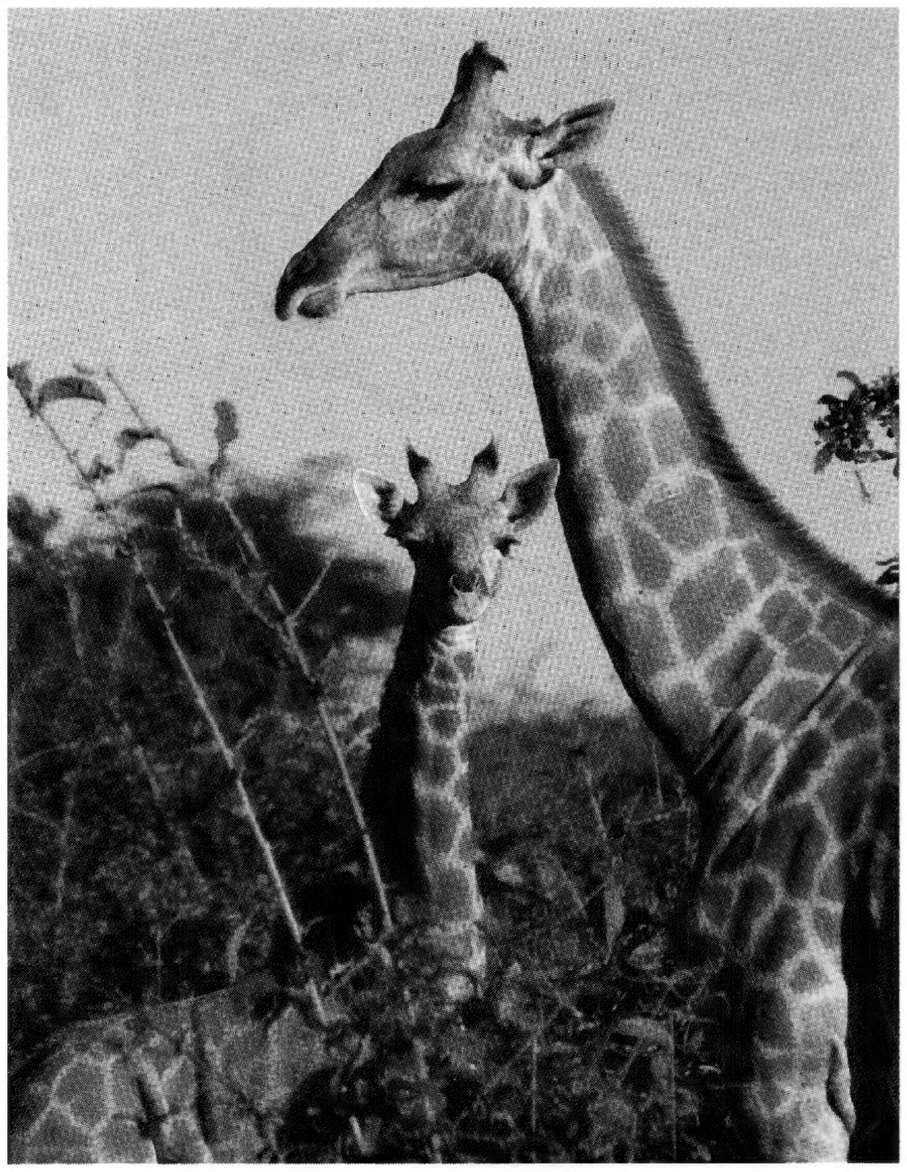
Steinhart Aquarium biologist Ned McAllister checks on young golden mantella frogs. Native to Madagascar, a large island off the coast of East Africa, these frogs secrete mild toxins from their skin. Their bright yellow bodies send a clear message to potential predators: "Stay away, I'm poisonous."

ACADEMY TRAVEL PROGRAM

The mission of the Travel Program is to offer Academy-led tours that place members in the context of specifically chosen natural environments. Teaching, understanding, and conservation are our goals.

SOUTH AFRICAN CAPE & KRUGER NATIONAL PARK

(with optional extension to Mozambique)
August 28 — September 9, 2007
Leaders: Terry and Bonnie Gosliner

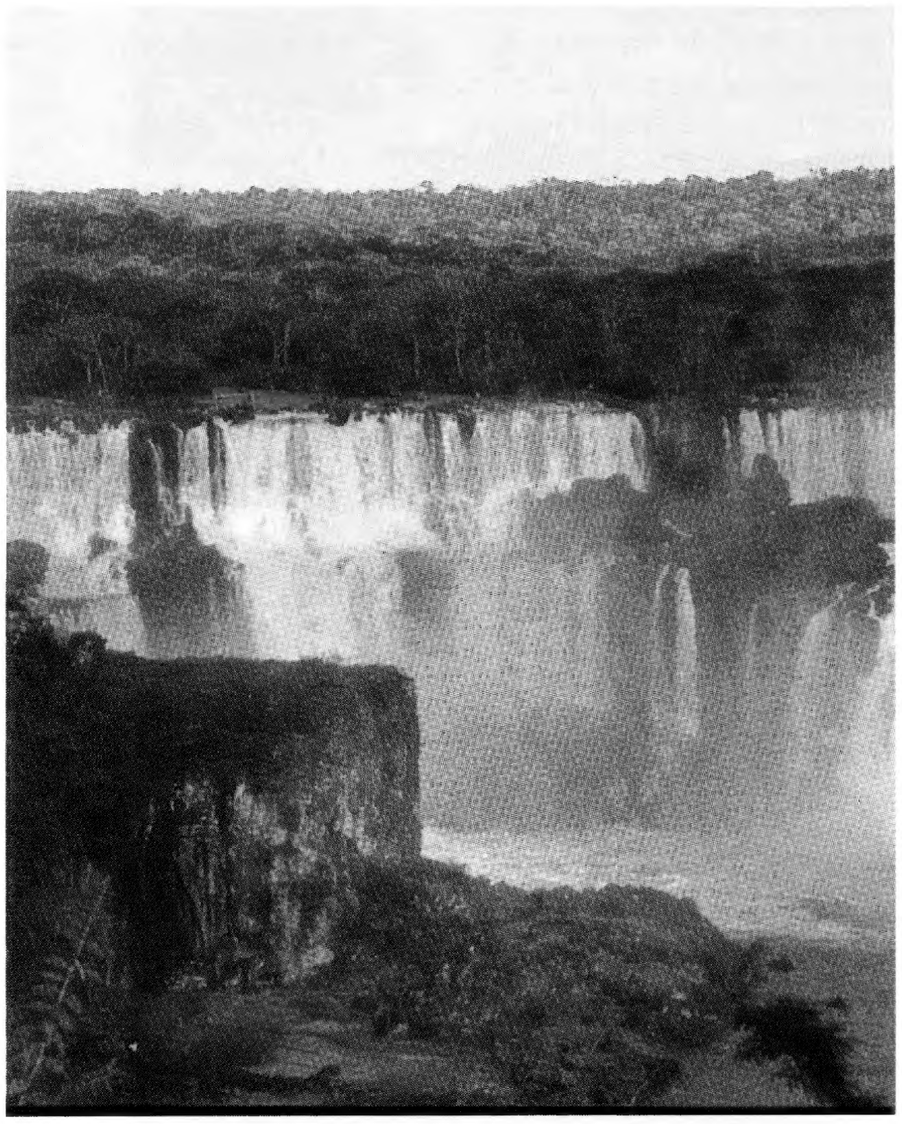


On this exciting tour, designed exclusively for Academy members, you will explore the trails at the top of Table Mountain and the wildlife at the tip of the Cape of Good Hope, including Africa's only penguins. You will learn about the South Africa of today as you visit Robben Island and the Cape Malay quarter, then share a bit of history at beautiful villages over 300 years old. After experiencing the springtime profusion of wildflowers along the amazing coastline you will explore private wildlife reserves and legendary Kruger National Park in open vehicles that get you close to elephants, lions, and leopards.

Cost: $7,695/person, based on double occupancy, plus airfare

NATURAL TREASURES OF BRAZIL

September 23 — October 7, 2007
Leaders: Frank and Mary Beth Almeda

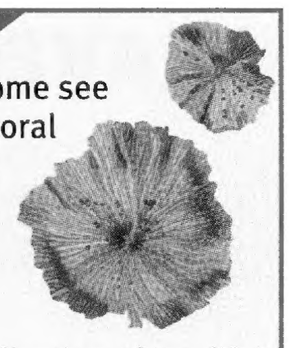


Brazil has the highest biodiversity of any country in the world. On this exciting tour you will experience the subtropical and temperate forests with large stands of bamboo in the Atlantic rainforest of Itatiaia National Park; view the convergence of Chapada's rivers which form two of the largest and most important river basins in the world—the Amazon and the Plata – in the Chapada dos Guimaraes National Park; and spend four nights in the sprawling Pantanal, the world's largest flooding area and a rich feeding ground for birds and other wildlife. After viewing the spectacular Iguazu Falls and the surrounding rain forest you will complete your trip with time to explore Rio de Janeiro.

Cost: $6,325/person, based on double occupancy, plus on-tour and international airfare

For brochures or additional information, please contact the Academy Travel Office.
Phone 415.901.8129 or 800.853.9372 E-mail: calacademy@hcptravel.com

UPCOMING SPECIAL EVENTS



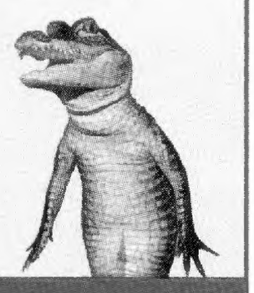
Come see our coral nursery, take a peak at our ancient specimens and Naturalist Center, and preview our growing collection of sea life!

March 15, 5:30 pm – 6:30 pm
Friends Behind-the-Scenes Tour

Friends of the Academy are invited for an exclusive tour with Dr. Brian Fisher, Chair of the Entomology Department.Discover how trap-jaw ants from Costa Rica can strike at speeds of up to 145 miles per hour, setting a new record. Also, hear more about Dr. Fisher's discovery of more than 900 new species of ants in Madagascar alone, including the Madagascar Dracula Ant. For more information contact Jeanna Yoo at 415.321.8413 or jyoo@calacademy.org.

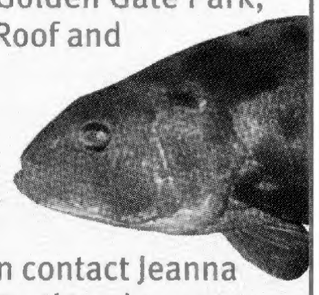
April 25, 7:00 pm – 9:00 pm
Curator's Reception

Donor Circle and Friends members are invited to enjoy an evening reception with Academy scientists as they share their favorite specimens from the museum's collection and news of their latest discoveries. RSVP by Wednesday, April 18 by calling 415.321.8215 or emailing membership@calacademy.org.



May 6 – Guild Family Picnic

At the Guild Family Picnic in Golden Gate Park, catch a glimpse of the Living Roof and learn more about the other sustainable design elements that will make the new Academy a resource-efficient, environmentally sustainable building. For more information contact Jeanna Yoo at 415.321.8413 or jyoo@calacademy.org.



May 13 – Mother's Day at the Exploratorium

All Academy members who are mothers can bring their immediate family to the Exploratorium for free admission on Mother's Day. Simply present your Academy membership card at the admissions desk. Visit www.exploratorium.edu for hours and directions.

CHILDREN'S BIRTHDAY PARTIES

Have your child's party at the Academy. The decorative second floor classroom is available for children's birthday parties on Saturdays and Sundays. Choose from an Aquarium or Dinosaur themed party that includes related take-home crafts and a guided tour. Children's birthday parties are open to members only. Book early as party spaces fill up fast. For more information call Centralized Reservations at 415.321.8000 or email birthday@calacademy.org.

THANK YOU

Gifts received September 1, 2006 – November 30, 2006

Friends of the Academy

Gifts of $1,000 and above to the Academy's Annual Fund.

Gayle A. Anderson
Mary Ann and Sam Aronson
Dr. Alissa J. Arp
Mr. and Mrs. Peter Avenali
Frank and Denise Balma
Michael J. Bennett
Mr. Lance Berc
Dr. and Mrs. Joseph Bernstein
Dr. Barbara L. Bessey and Dr. Kevin J. Gilmartin
Dr. Janet B. Bodle
Bruce Bowen and Junona Jonas
Ms. F. Elizabeth Burwell
The Byers Family
Mr. Karry E. Carr
Elizabeth C. Carroll
The Michael & Jeanie Casey Fund
Dr. and Mrs. Lance G. Darin
Dr. and Mrs. Allen M. Dekelboum
Rajnikant and Helen Desai
Charles and Mary Ann Dietrich
Mr. and Mrs. David Dollinger
Ms. Sandra Donnell and Mr. Justin Faggioli
Mr. and Mrs. Frank J. Ehret
Greg Endom and Vickie Desofi
Ms. Gail Enfiajian and Mr. William D. May
Richard Faggioli
Randi and Bob Fisher
Marilyn A. McCarrick Forni
Mr. and Mrs. Barry Galvin
Mark and Louise Gaumond
Mr. and Mrs. Ronald Goodman
Joseph W. Goodman
Peter and Victoria Grey
Mrs. Edward H. Grubb
Mr. Charles E. Halfmann
Jeanne B. Hittell
Mr. and Mrs. Andrew Holden
David and Janyce Hoyt
Stephen Hufford and Gretchen Frantz
Carolyn Del Curto Infante
Mr. and Mrs. George F. Jewett, Jr.
Dr. Ann L. Johnson
Donald and Roslyn Kahn
Sarah and Jonathan Kahn
Emily Kalish
Don and Donna Kelleher
Mr. and Mrs. Thomas B. Klein
Mr. and Mrs. A. M. D. Lampen
Ambassador Bill and Jean Lane
Professor and Mrs. Paul Licht
Mrs. Edmund W. Littlefield
Ms. Vera M. Long
Lou Anne and Everett Martin
Chris and Stan Mattison
Lucia Matzger
Mr. and Mrs. Walter J. McCullough
Dr. Patricia McEveney
Tina and Hamid Moghadam
Mr. and Mrs. George G. Montgomery, Jr.
Jackie and Howard Nemerovski
Ms. Jeanne Newman
Mr. and Mrs. William L. Newmeyer, III
Mr. Michael J. Nolin
Carol and John Northwood
Mr. and Mrs. William P. Parish
Mike and Laura Patnode
Virginia Patterson
Barbara Pino, Elena Goldstein, Adam Goldstein Evan Goldstein
Tom and Carol Platner
Carmen and Gail Policy
Ms. Carol Preston and Ms. Maria Brown
Harold and Suzanne Raphael
Mr. and Mrs. Sanford Robertson
J.P. and Kelly Scandalios
Michael Scharfenstein
Mary and Leonard Schreiber
Patricia K. Scott
Olivia Sears and Craig Bicknell
Mr. and Mrs. Edwin A. Seipp, Jr.
Mr. and Mrs. Barton W. Shackelford
Judy and Ken Siebel
James L. Smith and Joyce T. Smith
Joan E. Steinberg
Mr. Daniel E. Stone
Edgar N. Stone
Mr. Randy Taylor
Valentine Thaler
Martin Vanderlaan and Patricia V. Post
Dr. and Mrs. Geerat Vermeij
Hugh and Eleanor Visser
Vartan and Lorraine Voskanian
Mr. and Mrs. Paul L. Wattis, Jr.
Wallace and Eve Wertsch
Diane B. Wilsey

New Donor Circle Members

Donors who recently increased their support ($125 to $999).

Mr. Thomas G. Atwood
Mrs. Judith A. Becker
Mr. James S. Bostwick and Ms. Marti Phillips
Ms. Brittny Bottorff and Mr. Asim Bhansali
Mr. and Mrs. Steven J. Bottum
Mrs. Mary Delanty Brown
Ms. Laura Brugger and Mr. Ross Sappenfield
Mr. Roger Bruno and Ms. Margaret Schrand
Ms. Honor Bulkley
Mr. Alexander J. Castle
Mr. and Mrs. David J. Conley
Ms. Beatrice Coxhead
Mr. Jay Dold and Ms. Shannon Hall
Brian Ebbs and Sheryll Ebbs
Mr. and Mrs. Charles E. Emmaneel
Mr. William F. Euphrat and Ms. Nancy A. Weston
Mr. and Mrs. Gary Fogg
Mr. and Mrs. John B. Foster
Mr. and Mrs. John Gurney
Mr. Thomas E. Haven
Mr. Gene Heller and Mrs. Kathryn M. Godfrey
Mr. Theodore Heublein and Ms. Adele Lopez
Mr. and Mrs. Jerre Hitz
Mr. Kenneth Howard
Mr. and Mrs. Lawrence Jacobson
Mr. George H. Kelly
Mrs. Megan Koch and Mr. Stewart Koch
Mrs. Elisabeth Levy
Mr. Paul Lum and Ms. Susan J. Lee
James MacCuish, M.D.
Mr. and Mrs. Malcolm Manson
Mr. and Mrs. Steven Meyers
Ms. Stephanie Moore
Dr. Thomas J. Morris and Mr. Joseph Sidas
Mr. Richard Morrison
Mr. and Mrs. Robert Pauley
Mr. and Mrs. Gustavo Pineda
Ms. Barbara Potts
Mr. and Mrs. Austin Prindle
Ms. Ursula E. Ralph
Ms. Helen B. Ripple
Mr. and Mrs. Matthew Rossie
Dr. Lionel Schour
Mr. and Mrs. Jeff Senigaglia
Mr. and Mrs. Al Steenvoorde
Mrs. Barbara Stevens
Mr. and Mrs. Robert M. Vernon
Mr. and Mrs. Andrew M. Wiesenthal
Ms. Lara Witter and Mr. Curt Sigfstead
Ms. Constance Wood and Mr. Christopher Ste fan
Charles C. Wycoff, M.D.

Foundation and Corporate Gifts

$50,000 and above
The Schlinger Foundation

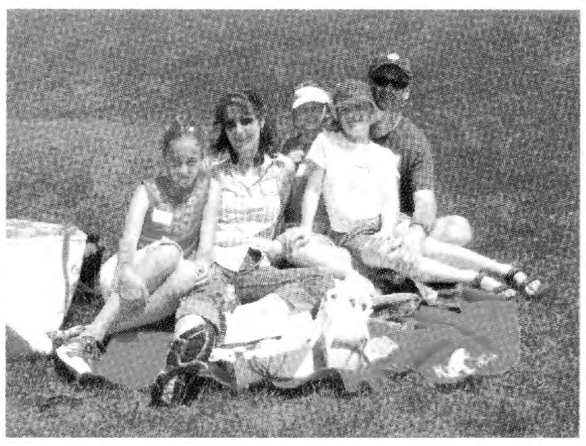
$25,000-$49,999
Amgen Foundation
S.D. Bechtel, Jr. Foundation

$10,000-$24,999
Anonymous
Gap Foundation

$1,000-$9,999
Alta Partners
American Association for the Advancement of Science
Arrowhead Water
Brightroom, Inc.
Compton Foundation, Inc.
Thelma Doelger Charitable Trust
Thomas and Eva Fong Foundation
Gen-A Marketing
Evelyn & Walter Haas, Jr. Fund
Crescent Porter Hale Foundation
I & G Charitable Foundation
LEF Foundation
Naked Juice
Organic Valley Family of Farms
Passage Events & Promotions
PowerBar
Road Runner Sports
B.T. Rocca, Jr. Foundation
Traci's Gourmet Granola
Woodside Chiropractic

The Academy has made every effort to ensure the accuracy of donor lists. Should you find an error, please contact Marlene Dabis at 415.321.8405 or mdabis@calacademy.org.

Discover the Academy Guild

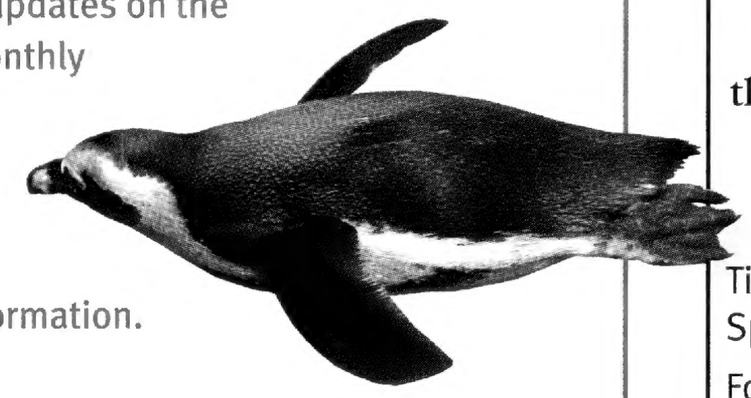


Academy Guild members enjoy a full calendar of family focused social and educational events, such as behind-the-scenes tours, hikes, and special Academy parties, including the Guild Family Picnic in Golden Gate Park in May.

To learn more about the Guild or to join, contact Jeanna Yoo at 415.321.8413 or jyoo@calacademy.org.

Also, visit us online at www.calacademy.org/guild.

MEMBERS' eNEWS For important information on events and programs as well as updates on the new Academy, sign up for the monthly members' eNews. Send your name, membership number, and email address to membership@calacademy.org. We do not trade or share this information.



Membership questions? Contact us: 415.321.8000, toll free 800.794.7576 Monday – Friday, 8:00am to 5:00pm or membership@calacademy.org.

22nd Annual Academy Ball

CORAL REEF *Carnivàle*

Thursday, May 10, 2007
City Hall, #1 Dr. Carlton B. Goodlet Place, San Francisco
7 pm to Midnight

Dinner Chairs: Harry and Shirley Hagey
Corporate Chair: Mark Gaumond, Ernst & Young LLP

Presenting Sponsor: DODGE & COX

Proceeds benefit the Academy's education, public, and research programs.

This event will celebrate the Academy's coral nursery currently being developed at Howard Street, which will be incorporated into the 212,000-gallon living Coral Reef tank at the new Academy.

City Hall's magnificent Rotunda and North and South Light Courts will be transformed into an elegant evening venue, featuring cocktails and dinner catered by McCall Associates, wines by Rodney Strong Vineyards, dancing, and entertainment. Special Academy traditions will continue throughout the event, making this a most spectacular evening.

Valet Parking. Black Tie.

Tickets for this gala fundraising event begin at $400 per person. Sponsorships begin at $5,000.

For more information and reservations contact Deidre Kernan at 415.272.4328 or dkernan@calacademy.org.

For sponsorship information contact Rebecca Schuett, Corporate Development, at 415.321.8234 or rschuett@calacademy.org.

WHY WE ARE EASTWOOD ASSOCIATES

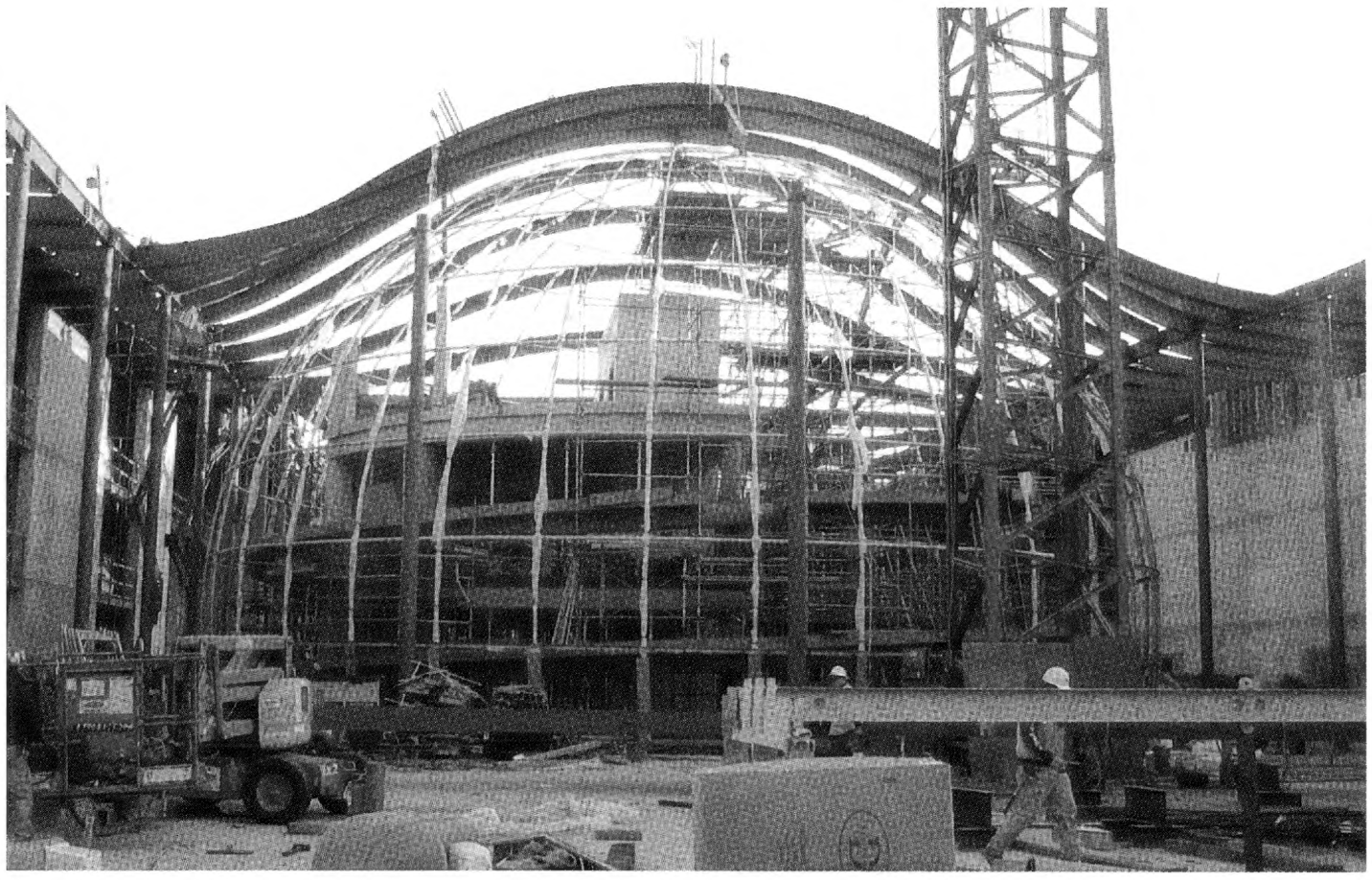
Eastwood Associates are extraordinary in their commitment to the Academy through gifts in their estate plans. Jackie Feretzis shares why she became an Eastwood Associate.

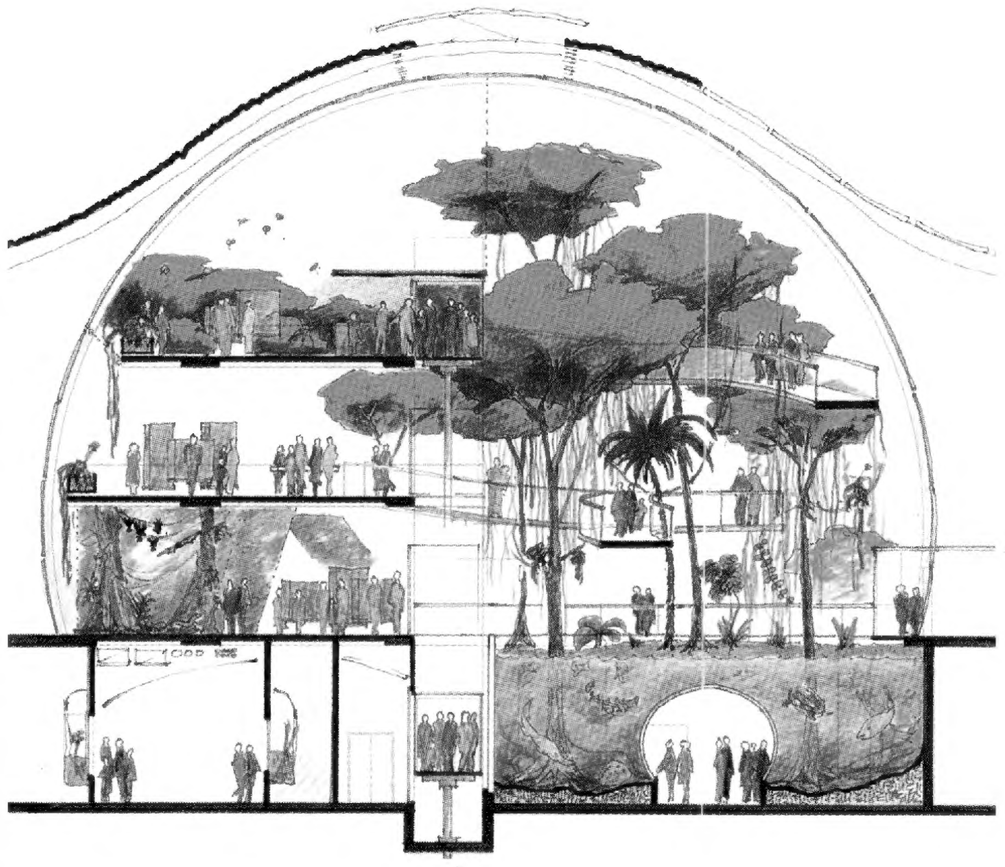
*Charlie Halfmann and Jackie Feretzis enjoy a tour of the **Dinosaurs** exhibit with Dr. Carol Tang, Director of Visitor Interpreter Programs (at left).*

"For over 40 years the Academy has offered me so much knowledge and pleasure through its exhibits, both permanent and special. I have been a member since the sixties and a volunteer whenever time allowed. I am deeply honored and delighted to be part of the Eastwood Associates and want to express in as many ways as I can my gratitude to the California Academy of Sciences."

– Jackie Feretzis

For information about Eastwood Associates, contact Louise Gregory at 415.321.8407 or lgregory@calacademy.org.





Left: Construction is now complete on the metal frame for the Rainforests of the World exhibit. Installation of the glass panels on the dome will begin in April. Living trees that are currently being grown in Florida will be lifted into the exhibit by crane sometime next summer.

Right: The exhibit will house over 1,600 live animals, including flying frogs, colorful chameleons, bat-eating snakes, and free-flying hummingbirds. At "Dive Stations" on each level of the dome, visitors will be able to touch scientific specimens collected in the rainforest, examine the tools used to study those specimens, and learn about the ways that Academy scientists are working to document and preserve some of the most biodiverse places on Earth.

Spring has come, and 50,000 coconut-husk trays full of native California plants are in full bloom down in Carmel Valley, awaiting their installation onto the new Academy's living roof. The rolling steel and concrete skeleton for this roof is now complete, scattered with dozens of round holes for operable skylights that will allow sunlight and fresh air to reach the exhibits below. In a few months, the roof will receive its first plants and begin providing healthy habitats for native birds and insects.

Beneath the rolling roof, the metal skeleton for the new Rainforests of the World exhibit is also complete. This dome, which measures 90 feet in diameter, will be the first spherical living rainforest display in the United States and the largest in the world. The exhibit will also be the first to include an elevator that descends into an underwater flooded forest display. Teeming with over 1,600 live animals, including more than 600 free-flying birds and butterflies, nearly 100 exotic reptiles and amphibians, a cave full of bats, and even a two-toed sloth, the new Rainforests of the World exhibit will be a breathtaking component of the new Academy when it opens in late 2008.

Enclosed in glass, temperatures will be maintained at 82-85 degrees Fahrenheit inside the dome, and humidity will be maintained at 75 percent or above using a special misting system. In addition to natural sunlight from the skylights in the roof, the exhibit's live trees and plants—including over 30 different species of orchids—will be nourished by powerful metal halide lights. A spiraling ramp will carry visitors through the top three floors of the exhibit, introducing them to rainforests from Borneo, Madagascar, and Costa Rica. Then, an elevator will bring visitors down into the Amazonian Flooded Forest, where they will walk through an underwater tunnel that provides views into a 100,000-gallon tank. Hundreds of fish will cruise overhead, including armored catfish, South American arawanas, spotted peacock bass, and angelfish. Bigheaded Amazon River turtles will also share this unique tank.

CALIFORNIA
ACADEMY OF SCIENCES

875 Howard Street
San Francisco, CA 94103
Open Every Day
10am - 5pm
calacademy.org
415.321.8000